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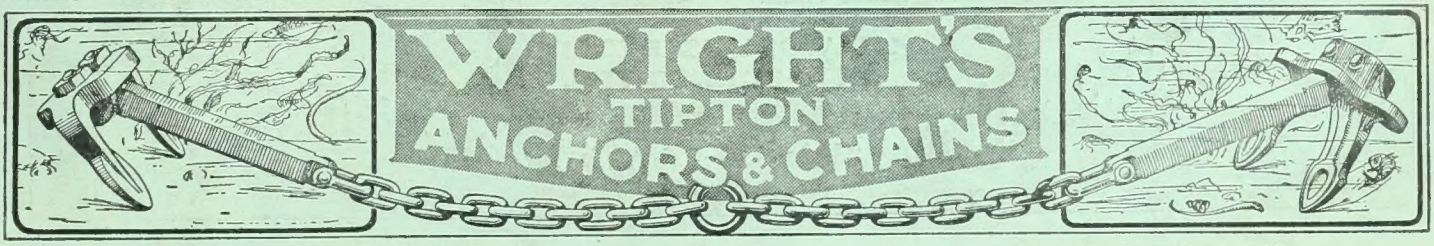

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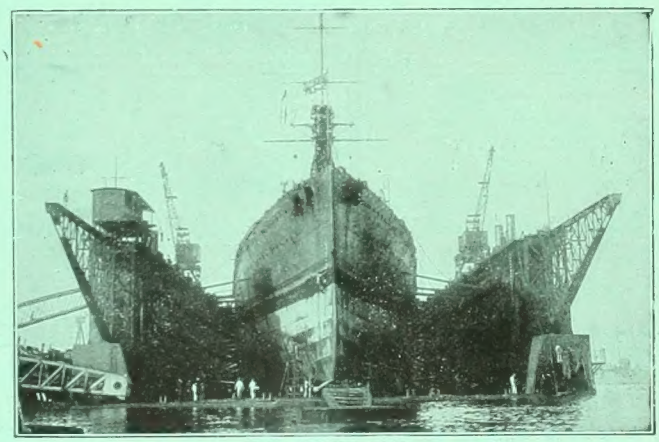

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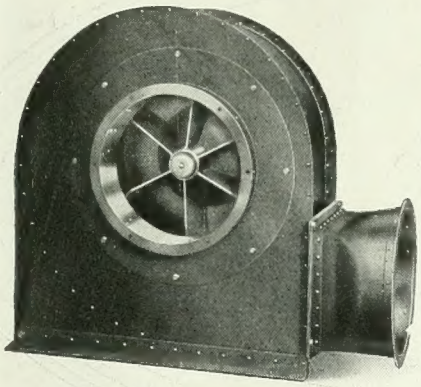

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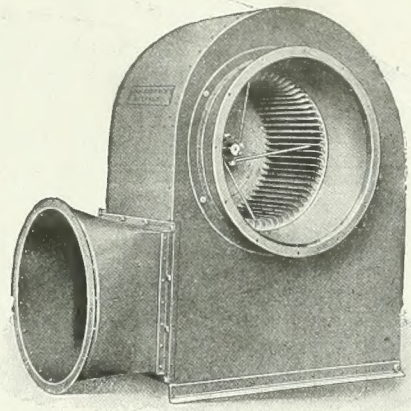

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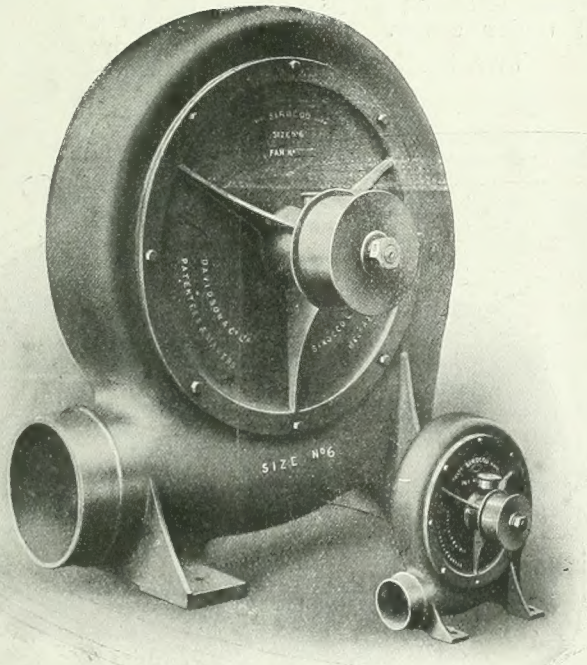

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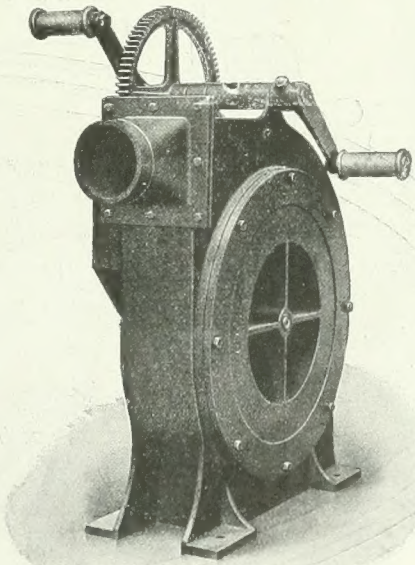

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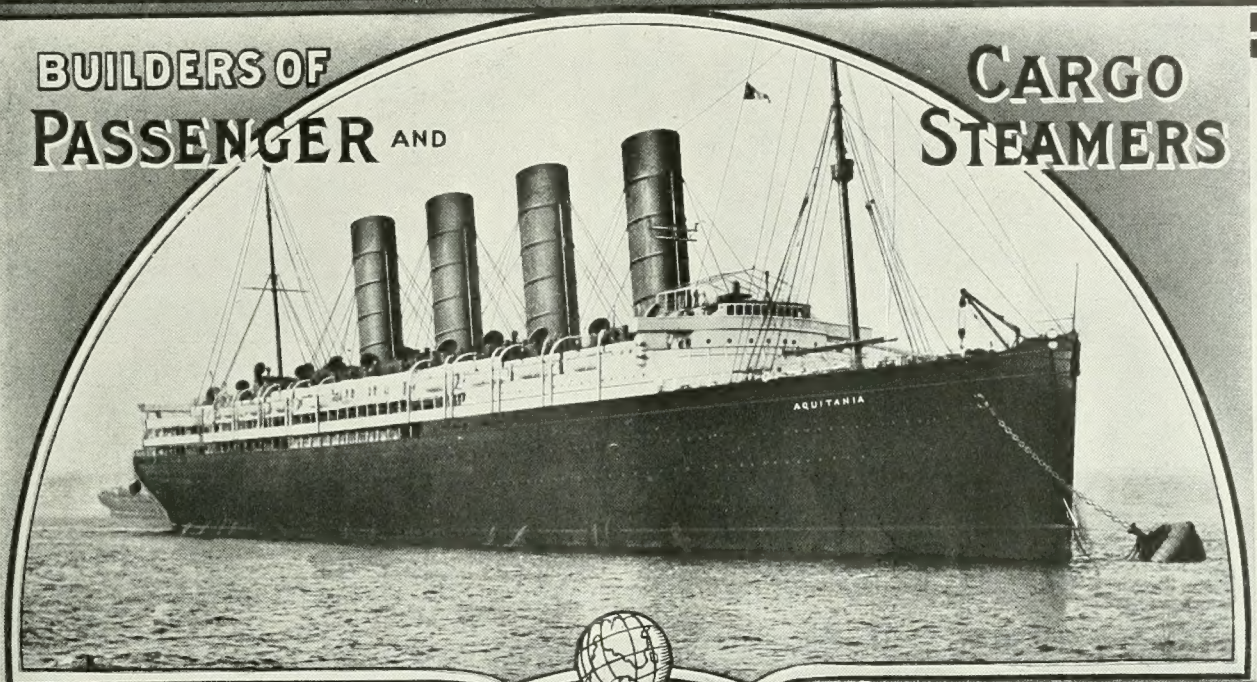

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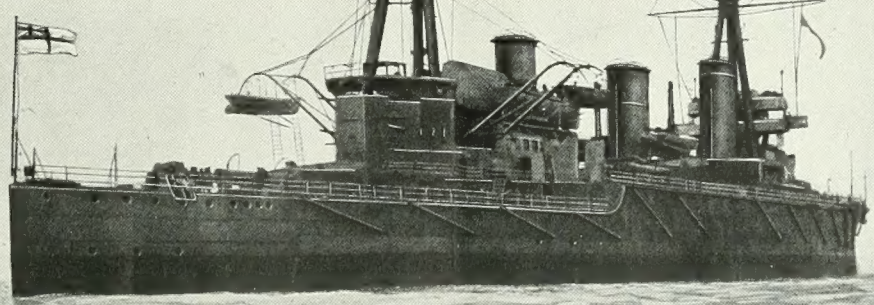

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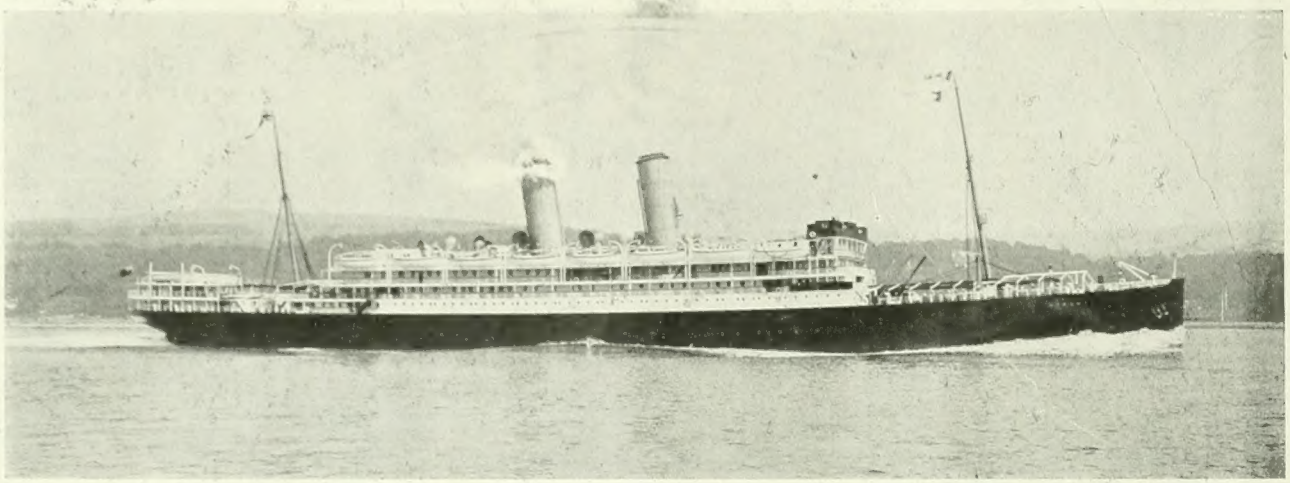

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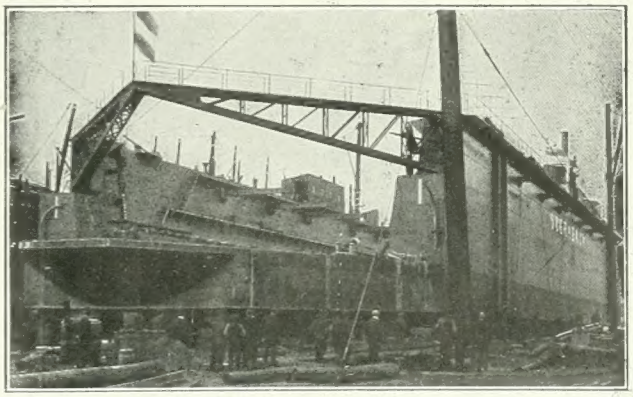

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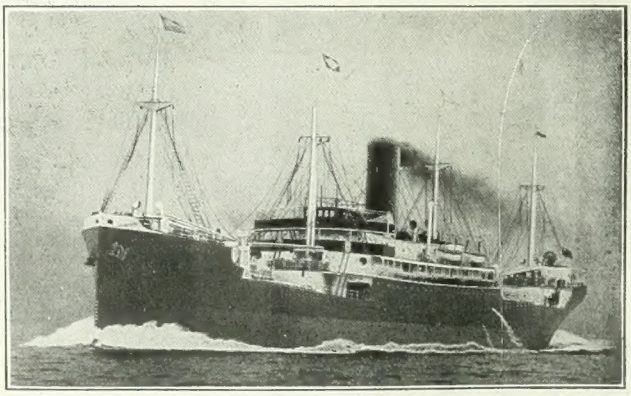

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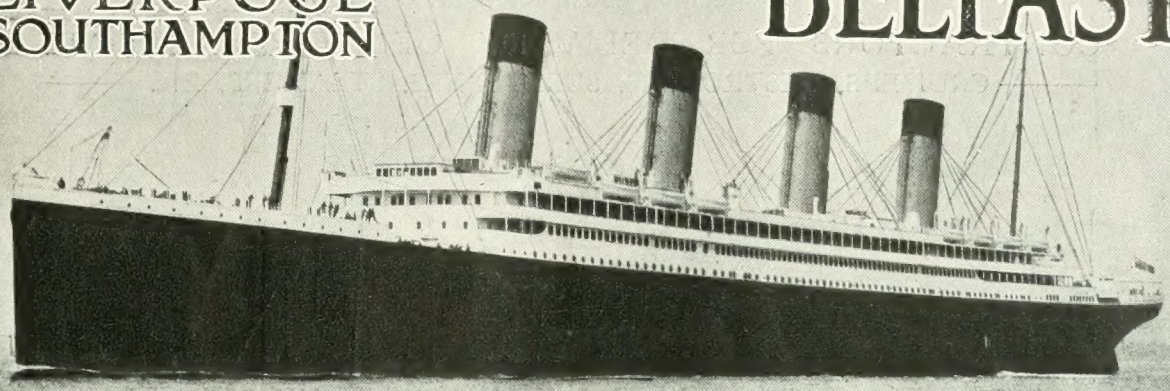

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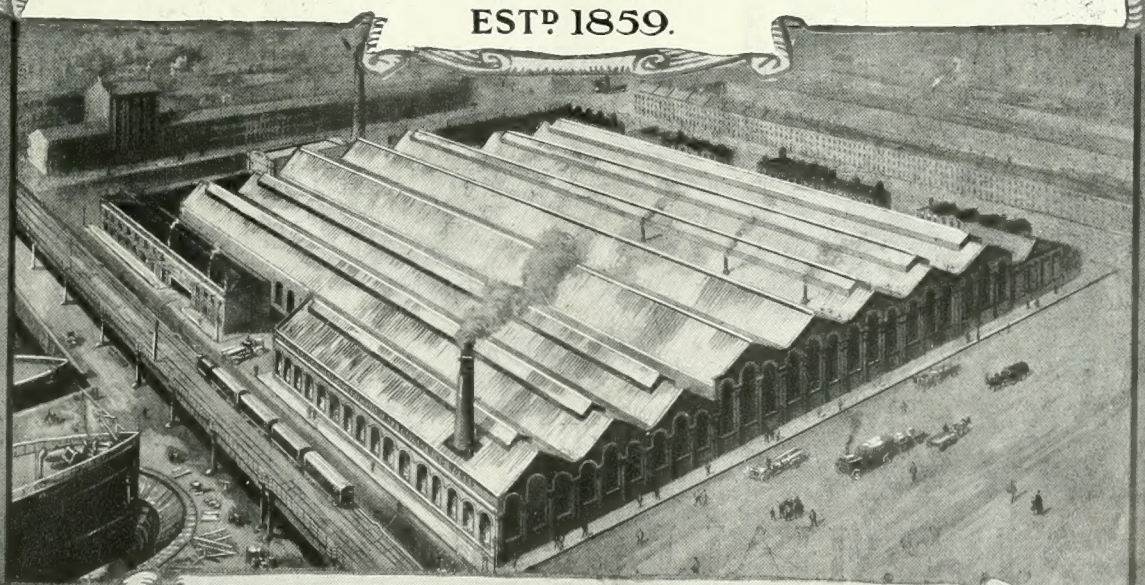

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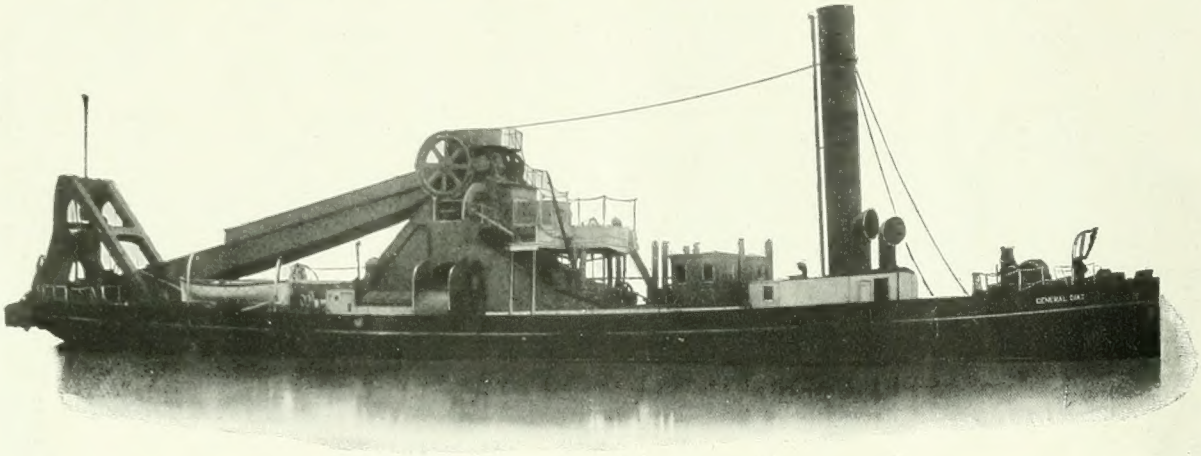

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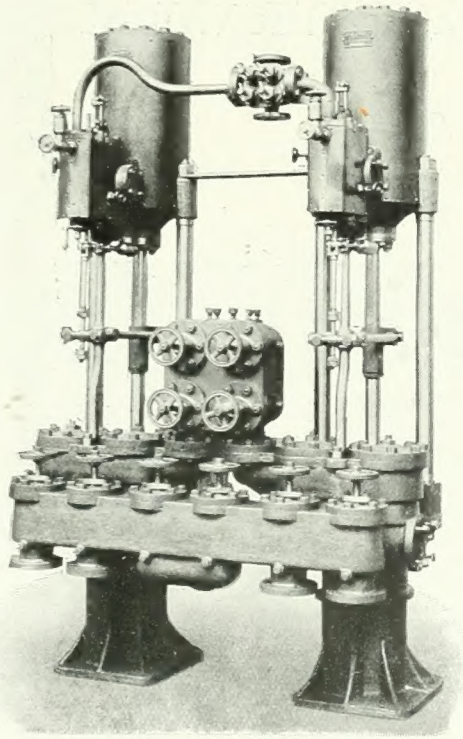

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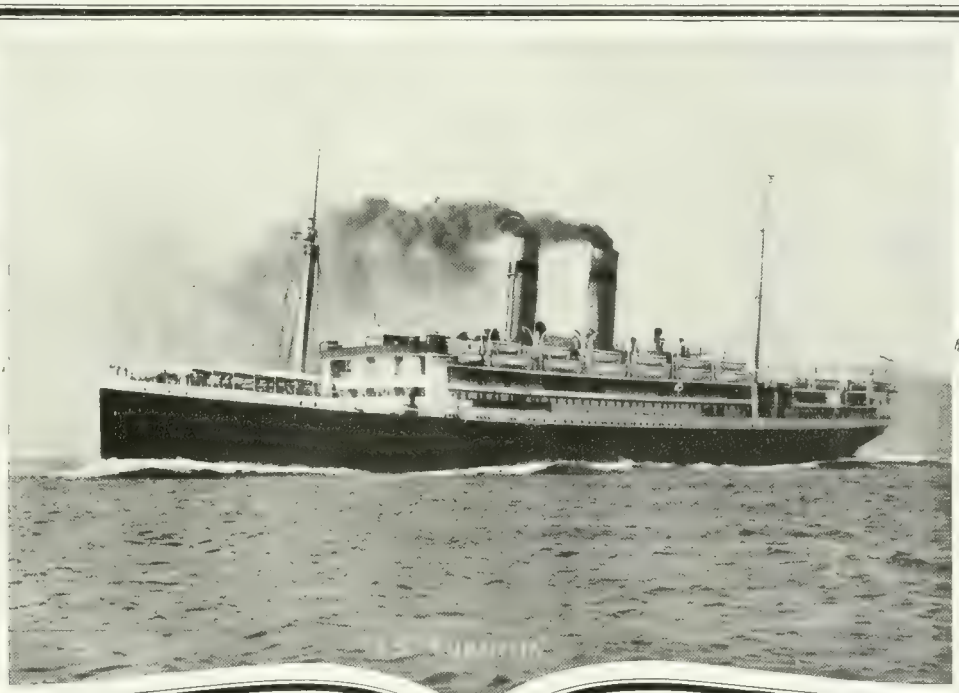

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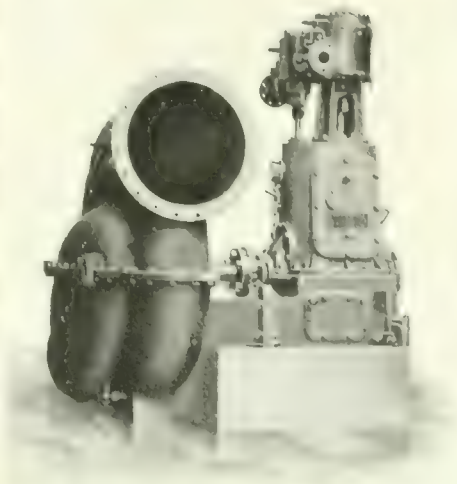

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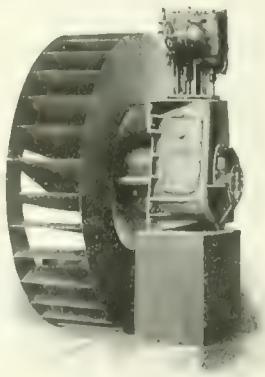

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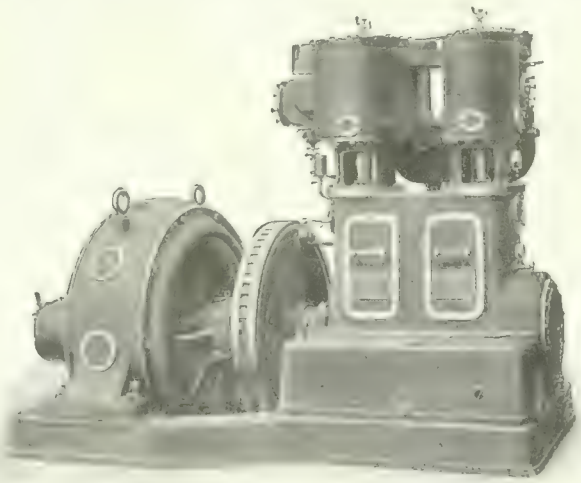

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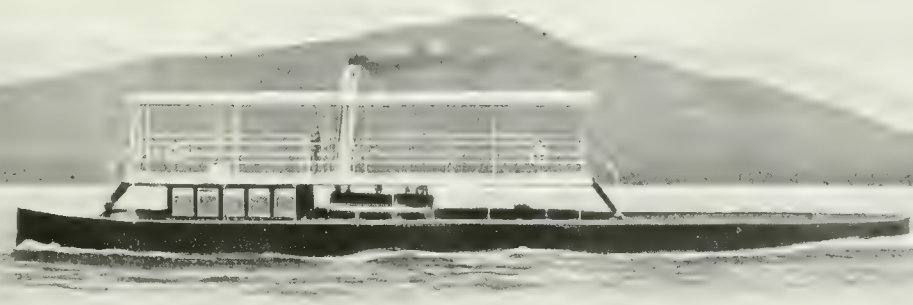

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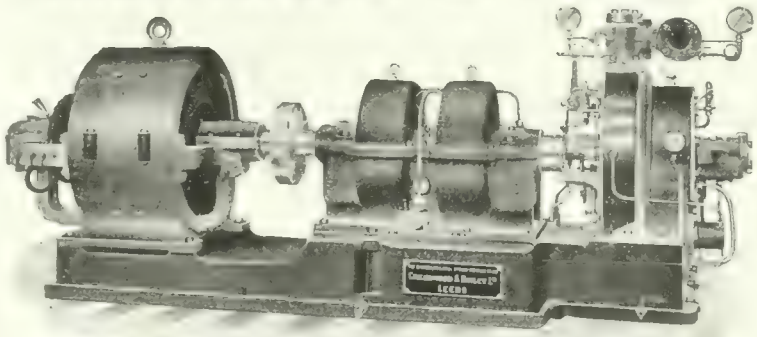

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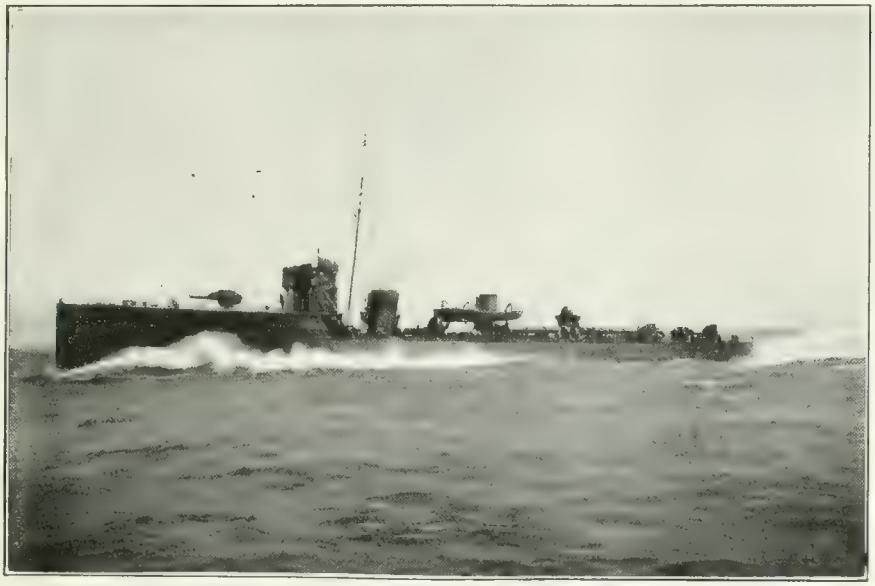

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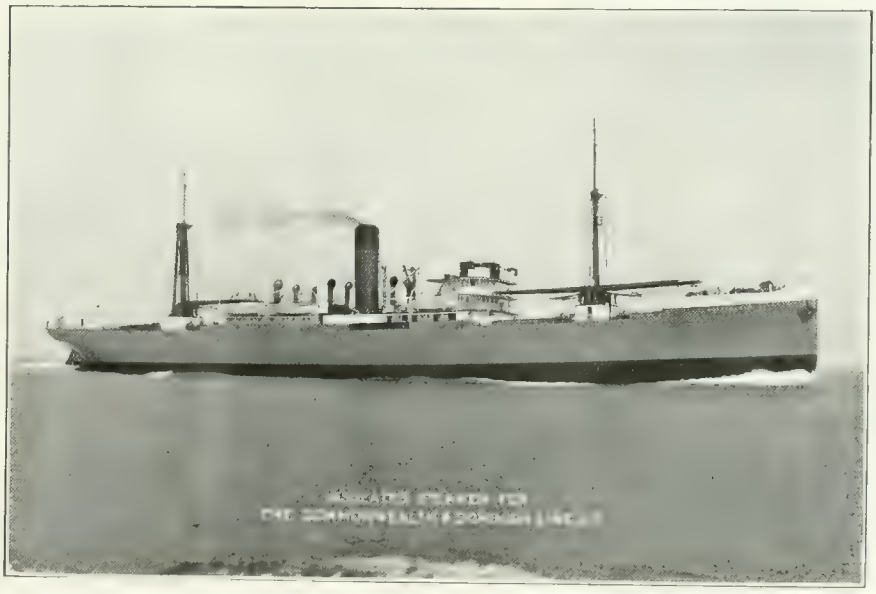

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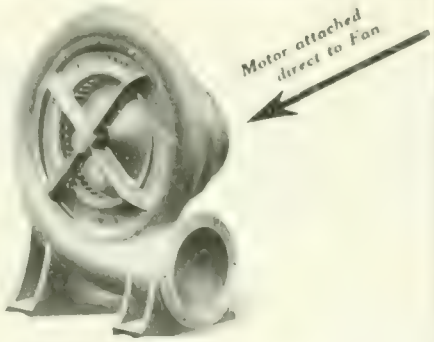

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Shipping and the Budget.

IN our view the House of Commons has failed to grasp the very weighty national reasons which have been urged why the shipping industry should have been at least partially relieved from the burden of the excess profits duty. What we have insisted upon is that the sources from which the capital necessary for the carrying on of British shipping and for its extension after the war should be conserved. Agriculture, which has benefited much more from the conditions brought about by the war than has shipping, is specifically exempted. Mr. R. D. Holt with much cogency pointed out in the House of Commons the anomaly which was created by this unequal treatment. Mr. Houston indeed moved an amendment to the Finance Bill to except shipping from the operation of the excess profits duty, but he used the occasion rather to enforce "the extravagant and wasteful use of ships by the Government" than to argue the case of shipping on its merits. Out of 3,767 merchant vessels of a tonnage of 1,000 tons or upwards the Admiralty appear to have taken something between 1,500 and 1,800. We readily admit that extensive Admiralty requisitioning and chartering are absolutely needful, but when we are told by Mr. Houston that a steamer of 10,000 tons gross register is lying at harbour in the Ægean Sea for the accommodation of 40 military and naval officers, then the matter requires examination. That, of course, scarcely directly arises out of the excess profits duty. The amendment was negatived. We note that in a subsequent discussion the Chancellor of the Exchequer promised to give special treatment to the profits derived from insurance and made by underwriters. Into these, chance enters to a very considerable extent. If there is a case for excluding the excess profits of agriculture there is a stronger one for excluding those of shipping. We report the speeches on page 423.

Incendiary Fires.

The fires of alleged incendiary origin on the steamers *Rio Lages* and *Euterpe* recall the similar case of the steamer *Minnehaha* some weeks ago, while several other instances of damage caused by enemy machinations could be quoted. These outrages furnish further instances of how the marine underwriter finds his settlement increased by claims which, though caused by the war, are not excluded by the clause known as the "free of capture and seizure" clause. A fire of incendiary origin is not a consequence of hostilities or warlike operations, and fire being expressly included, without any qualification, in the perils insured against in the marine policy the claim falls on the marine underwriter. In the case of a vessel being missing without evidence of the cause of loss, as in the cases of the *Aberdon* and *Beeswing*, a compromised loss of 50 per cent. on each policy, the war risk and the marine risk, can be arranged, but by no stretch of the imagination can an incendiary fire claim be made to apply to a war risk policy and the marine risk underwriter is forced to accept the full responsibility.

Deviation at Sea.

Deviation at sea is always regarded by the Courts as governed very strictly by the light of the commercial adventure undertaken by the shipowner. In a recent case a steamer carrying a cargo of fruit from Gandia to London put into Corunna. It was December and the vessel remained there for 23 days. The bill of lading gave the steamer "liberty to proceed to and stay at any ports or places whatsoever, although out of or beyond the route to the port of discharge in any order for any purpose whatsoever, all such ports or places to be deemed included in the intended voyage." The shippers claimed damages for the deterioration to the cargo caused by the deviation to and the delay at Corunna. The Court allowed the claim. The view which it evidently took was that having regard to the nature of the voyage, the deviation and delay were not covered by the liberty given to proceed to ports outside the route of the voyage. They were not compatible with the underlying commercial adventure.

Enemy Interests in British Ships.

We see that the Board of Trade frankly admits that under the law it is possible for the ownership of a British ship to be vested in a company which has alien enemy shareholders. We said so last week. The Government evidently does not intend to introduce legislation to abolish such an anomaly. These aliens of course cannot exercise any control over the ship during the war, nor do they at present derive any pecuniary benefit from its operations. But we ask whether those profits held up in the meantime will at the conclusion of hostilities pass into their hands. The aspect of the matter which strikes us is that such alien interests in shipping really apart from legal technicalities constitute enemy private property at sea. By those technicalities they are withdrawn from the cognisance of the Prize Court. We give protection to what are virtually enemy proprietorial interests in British ships. Of course, in a legal sense the company registered in this country intervenes between the enemy shareholder and the law. The Government apparently intends to let the matter rest there, but the position is extremely unsatisfactory.

American State Fleet.

While the United States Cabinet is determined to renew at the next session of Congress the campaign for Government ownership of commercial steamship lines, it is intimated that owing to the strong opposition to the measure existing within the ranks of the party in power, the Government will only insist upon authorisation to acquire steamships for the purpose of inaugurating American steamship lines to South America and the Far East

[illegible] Government ownership in commercial circles is general, but there has been so much unintelligent opposition to proposed legislation [illegible] the existing order of things, notwithstanding that parties are brought to power on a definite programme to accomplish certain things, [illegible] *sine qua non* of political existence. Therefore, the attitude of "business" is no longer a gauge to the probable fate of an impending legislative measure, and the days have gone by since large commercial interests were able to obtain from Congress anything which they favoured. In fact, it is not reasonable to assume that determined opposition to any Bill on the part of "business," is a factor which may militate strongly for its favourable consideration by Congress.

Workmen's Insurance in Germany.

By a recent decree the Bundesrat has made a number of concessions in favour of those employees who, being under arms, wish for relief in contributions without invalidating their insurance. The concessions granted have been extended to those men, many of them sailors, who are interned and are therefore unable to serve, but still are subject to disability owing to the state of war. The new decree makes a number of provisions for both employees and employers, in some cases waiving contributions without involving such loss of benefits as would follow from the ordinary insurance law; and in other cases arranging that voluntary contributions be payable within six or twelve months of the conclusion of peace, without loss of benefit. Certain of these concessions apply also to workers thrown out of employment or suffering loss of wages on account of the war. In approved cases, employers are to be reimbursed for payments they have made in respect of men who were not discharged when they were mobilised. No repayments will be made, however, for August, 1914, in respect of men mobilised on the 2nd of that month, because they did not render a full month's military service—which is undeniable, but just a trifle keen. The first rule regarding repayments is that these cannot be made without production of the relevant papers proving service—after which, Clause 5 remarks that as the military authorities have the papers demanded by Rule 1, repayments cannot be made until after the war!

United States Shipbuilding.

Orders continue to be booked by the leading American shipyards and early delivery is the leading factor in the placing of contracts. On the other hand, it should not be forgotten that the peculiar financial relationship existing between the interests behind certain shipyards and those behind shipowning enterprises practically governs the placing of orders, so that the number of berths filled at a given establishment is no criterion either to its success or to its ability to out-distance its competitors in the volume of orders that particular yard is able to secure. It is accepted as axiomatic in certain quarters that the war is directly responsible for the present "boom," but the most cursory study of the class of tonnage being built will show that only in rare instances are American shipbuilders engaged in the construction of what might be called "competitive" ships. The excellent condition of the banks at present has no doubt largely influenced the placing of orders, some of which were held back for two years awaiting the dawn of better conditions in the domestic trade. This policy is responsible for much of the ills which afflict American shipbuilding, for when conditions are depressed, no one will order new tonnage, and when [illegible] the yards is not sufficient to give immediate attention to all the business offered. The result is that when the inevitable slackness in general trade takes place, the shipowners are no longer in a position to make the necessary [illegible] for the laying down of boats and for months afterwards the yards go begging for orders. These conditions prevent standardisation, for during periods of slackness, the builders will put up with any kind of imposition as to details of construction on the part of owners. The outcome is anything but satisfactory from the point of view of the builder, although the result has been that American owners have often obtained more complete cargo steamers from the point of view of powering and equipment than is the case in countries where the market for new tonnage is not so restricted as it is here.

Scandinavian Prospects.

In a letter from Copenhagen, the foreign correspondent of a German contemporary asserts that "the whole country here is in the throes of speculation. Phenomenally high prices rule on the Bourse for shipping and industrial shares alike, and all sorts of tales are spread concerning profits and policies often merely to foster speculation." The writer proceeds to quote from "a remarkable article in the *Borsen* concerning the prospects of Scandinavian shipping after the war. Agents and shareholders are warned not to be blinded by the present prosperity of shipping, but to bear well in mind future possibilities and probabilities. Tonnage now fully occupied is likely then to be free and there must be unprecedented international competition. Scandinavian countries must be prepared, it is urged, to feel the effect of Germany's efforts to regain her lost shipping trade. In view of the extent and degree of competition which will arise, Scandinavian owners are advised to build up substantial reserves from the plenty now falling to their lot. The various northern lines should also co-operate so that united they may deal with conditions which would cripple them individually. The foundation of a joint fund and suitable central organisation is recommended as the best means to preserve Scandinavian overseas traffic to Scandinavian owners.

Too much Publicity.

We are beginning to be of the opinion that the proceedings of the Local Munitions Tribunals are getting far more publicity in the newspapers than they deserve. At first sight it, no doubt, seems as if the publication of decisions could not fail to have a salutary effect—especially the publication of decisions on charges of losing time. The truth is, however, that the penalties imposed for losing time are in the majority of instances so very small that they are not deterrent to the practice at all. The small section of the men who regularly lose time laugh at them. So lightly indeed do they regard them that in several places courts set up to try cases are turned by the rank and file of labour into places of entertainment in which everybody with any authority is ridiculed and the Munitions Act is made light of. Accounts of the "uproarious proceedings" duly appear in the local newspapers, and readers not directly concerned are shocked. The makers of the disturbances are not. On the contrary, they are pleased with the publicity which their antics get, and consider themselves to be in a small way heroes. Now, it seems to us that if the proceedings before Local Munitions Tribunals had their value as news measured by ordinary editorial standards the "heroism" of these flouters of the law would be considerably diminished. The accounts are not worth the space they get. Even the decisions of the tribunals on other points have less value than they are assumed to have, for no clear principle underlies them taking them as a whole. The only effect of the excess of publicity which the proceedings of the courts are getting is to give the wrong men an exaggerated sense of the worker's present importance to the State.

Post-War Shipbuilding.

There does not seem to be much doubt that when the necessity for the present concentration on naval work disappears there will be rather more than the normal activity in merchant shipbuilding. Both a natural and a war wastage will have to be made up, and shipbuilders will be busily engaged making it up until the tendency is checked to still higher prices than those which rule just now. In the circumstances, it is permissible to ask what the attitude of the trade unions is likely to be towards this post-war activity. At present the percentage of avoidable lost time is everywhere higher than it ought to be. Prosecutions before Local Munitions Tribunals are not, of course, without effect. But for them the percentage of avoidable lost time would probably be even higher than it is. It is also very likely true that in the case of many men a feeling of patriotism acts as a sort of spur to endeavour. They are doing more war work than they would do civil work. In the period immediately succeeding the signing of peace terms there will be no Local Munitions Tribunals to keep the slackers up to the mark. Nor with only civil contracts in progress will there be a patriotic inducement to put in "the little more." But—and this is a fact to which we direct the attention of all workers—there is just as clear a patriotic obligation on shipbuilders and their employees to accelerate, where necessary, the construction of mercantile vessels as there is just now to accelerate the construction of war vessels. In the post-war period, it will not be a case of making money, but of fighting for our place in the world as shipbuilders and shipowners. The degree of our success in that struggle will depend on the extent to which the workers realise their responsibilities.

Protection against Fire.

In modern liners the subdivision of the vessels so as to confine the extent of fire, should this break out, receives almost as much attention as that of watertight subdivision. The general tendency of fire is to spread upwards through such ducts as lift shafts, stairways, light and air skids, and so forth. Such shafts cannot be avoided in any passenger ship. As Mr. Peskett pointed out in his paper read before the Institution of Naval Architects last year, the only feasible way of restricting fire is by means of vertical fireproof bulkheading. In most cases the attempt to arrest its upward spread would prove useless. Above the bulkhead deck light steel transverse bulkheads are fitted across the ships, these play the part of firescreens and are fitted with fireproof doors. In some vessels recently built in America in which fire-retarding bulkheads were installed, light steel construction was abandoned in favour of double thickness wooden bulkheads, lined on both sides with plaster board and covered with galvanised iron. Such construction, it is said, has demonstrated its superiority over light steel. On these steamers, the cargo spaces, emigrant and crew's quarters are lined with galvanised iron in the belief that this construction is better for fire-retarding purposes than steel alone. Many fire-extinguishing appliances such as automatic sprinklers, are also installed for the suppression of an outbreak should this occur. This part of ship design and equipment has received considerable attention of late years and leads to the greater safety of life at sea.

The Pallograph.

There has just been completed by the Sperry Gyroscope Company, Brooklyn, N.Y., the only pallograph in America. The pallograph is an instrument originally invented by Dr. Schlick for the measurement of the vertical and horizontal vibrations of ships. The Sperry pallograph is claimed to be superior to Schlick's device "in that it will not come into synchronism with any harmonic of the ship's motion. Of equal importance is the introduction of pencils for indicating revolutions, and a time marker indicating seconds." If Sperry's pallograph is superior to Schlick's, that superiority does not lie in the points mentioned, for the necessity for the natural period of vibration of the machine being remote from the period of the engines was appreciated by Schlick who made provision in the design of his instrument for obviating synchronism. In the Schlick pallograph also, records of the revolutions of the propellers and the time in seconds are obtained. There may be some improvements in the Sperry pallograph which are not in the Schlick instrument, but the latter is admirably suited for the accurate measurement of vibrations. In a contemporary which describes the Sperry instrument, a story is told of how Dr. Schlick was persuaded to bring his pallograph to England in order to investigate the cause of vibrations in the *Lusitania*. After working for 48 hours without rest, he found that the trouble lay in one particular blade, in one particular propeller. The ship was immediately docked and one blade was actually found to be 1·8 deg. out of alignment. This story is good, but there happens to be absolutely no truth in it. The builders of the *Lusitania* are one of the few firms in Britain (if not the only one), which possess a Schlick's pallograph, and this was in their possession for at least one or two years before the *Lusitania* went on trial.

Development of Engineering Science.

As President of the Liverpool Engineering Society, Prof. E. W. Marchant, D.Sc., delivered at the opening of the 42nd Session of the Society an address on the "Relation of Science to Practice in Engineering." At the outset of the address the author stated that in electrical engineering they were in the fortunate position of having had the science of the subject developed, if anything ahead of the practice. In mechanical engineering, however, the opposite method had been followed, and it was only recently that mechanical engineering science had been able to overtake practice, and that progress was now being made by the adoption of scientific methods. The application of science to civil engineering by applying the results of laboratory experiments was still less advanced, but the use of scientific methods in the design of bridges had been employed for many years, and the number of types of structure in which it was possible to apply the results of engineering science and experiments was rapidly increasing. In naval architecture the classical experiments of Froude and the experiment tank at Torquay and Haslar, and the effect they had had on the improvement in ship design, the valuable work of the National Physical Laboratory in studying the design of ships for the mercantile marine were examples of what was being done in a branch of engineering which in the past had suffered from lack of purely scientific attention.

The Location of the Whistle.

It is interesting to note that the Pacific Coast Steamship Company has lately been taking in hand the question as to what is the best position in which to locate the whistle on board a steamship. The customary position near the top of the funnel is, to say the least of it, an inaccessible one. Although the whistle is not to be accounted the least unreliable of the steam actuated appliances on board ship, it certainly does at times require attention, not only in port, but also at sea, and in the latter circumstance some inconvenience and risk may be incurred in giving the required attention. The method employed by the steamship company referred to above is that of locating the whistle in a more accessible position, and their experiments have shown that nothing is lost in the way of efficiency by this means. The steamer *Congress*, belonging to this company, a vessel of 7,985 tons gross, has a whistle 8 in. diameter placed 6 ft. 10 in. above the upper deck on the front side of the foremast. It is connected with an auxiliary steam line available near the mast on a lower deck. A steam trap is placed in this auxiliary line at the point where the whistle pipe connects. The discharge of this trap is in the exhaust line of the steam winches, and is placed there for the purpose of dealing with condensation from the whistle pipe. The latter is 2½ in. diameter, and insulated for its entire length.

Experiments have been made at sea as to the utility of this whistle as located, and these have proved entirely satisfactory. The steamers in passing are in communication by wireless, and in a position in fog to determine the distance apart and at such time the range of the whistle has been tested. It appears not only to have greater range than the customary whistle placed on the forward side of the funnel but also has the effect of materially decreasing the annoyance to passengers when the whistle is being sounded.

"PERILS OF THE SEAS."

SOME importance attaches to the decision of the House of Lords in the case of Stott (Baltic) Steamers, Ltd., *v.* Marten and others, because of the light which it throws upon what is known in marine insurance as the "Inchmaree clause," and its relation to perils of the seas and maritime perils. The facts of the case are quite simple. A floating crane in use in the Brandey Moor Dock, Liverpool, was lowering a boiler into the steamship *Ussa* when the pin of the shackle broke and the boiler was precipitated into the hold, causing considerable damage to the vessel. The shipowners made a claim against the underwriters to indemnify them for the damage, but the underwriters have successfully resisted it on the ground that it did not involve one of the risks covered by the policy on the ship.

Let us examine the relevant conditions of this policy, which does not now protect a shipowner against such accidents as the one which happened to the *Ussa*. The policy was a pretty usual one—a time policy for 12 months, including the conditions of the Institute Time Clauses. The perils insured against in the policy were "of the seas, and of all other perils, losses and misfortunes that have come or shall come to the hurt, detriment or damage of the ship." The ship was covered in dock as well as at sea, and Clause 7 of the Institute Time Clauses was the "Inchmaree clause."

This clause protects the assured against latent defects in machinery. Its introduction into policies is due to a legal decision given nearly 30 years ago in the *Inchmaree* case. In that case there was a policy on ship and machinery, including the donkey engine. Owing to a valve being kept closed which ought to have been open, injury was done to the chamber of the donkey pump. This being held not to be caused by perils of the seas or by any peril covered in the ordinary form of policy, the shipowner could not recover. In order to include such risks a new clause, "the Inchmaree clause," as it is called, was introduced. It provides that the "insurance also specially to cover (subject to the special free of the average warranty) loss of or damage to hull or machinery through the negligence of master, mariners, engineers or pilots, or through explosions, burstings of boilers, breakage of shafts, or through latent defect in the machinery or hull, provided such loss or damage has not resulted from want of due diligence by the owners of the ship or any of them, or by the manager."

On the cumulative effect of the various provisions in the policy and clauses attached, the owners of the *Ussa* based their claim. The Courts had to consider whether in the first place the accident was proximately caused by a maritime peril described in the policy. They all answered that question in the negative. As Lord Haldane said, the accident was one which might happen in loading a railway truck just as much as in loading a ship, so far as its general character was concerned. He attached no importance to the fact that the crane was a floating one, and there was no real analogy between what happened, and the collision of two vessels. Then the question came to be whether the Inchmaree clause did not qualify the policy and extend the character of the general risks. The House of Lords found that it did not expand the description of the risks contained in the policy. What it did, was to stand as it were alone, as an independent and self-contained condition. It simply provided that if the kind of accident which it described happened, it was to be covered independently as an addition to the perils enumerated in the policy. It was not to modify or qualify those other risks. They were to be construed exactly as if it had been absent. As their lordships found that the words of the clause did not cover the accident to the *Ussa* they therefore decided that the underwriters were not liable to indemnify the shipowner.

Such a case as this illustrates the distinction between perils of the seas and perils on the seas. The importance within its sphere of application of the case of the *Ussa* will not escape those who are interested in the subject of marine insurance. The case has been a long time in its passage through the courts, and the present Institute Time Clauses include damage done by cargo among their provisions, this having been included since the first hearing of the case.

AMERICAN SHIPPING AND THE WAR.

THE long-delayed American note on the subject of interference with United States ships and cargoes has been presented. It charges this country with unjustifiable infringement of neutral rights. We may state at once frankly that this arraignment of the manner in which we have exercised our belligerent rights does not carry conviction. It entirely fails to grasp the novel and essential factors of the present anomalous situation and it denies to this country the right to adapt its naval policy to meet new and elusive elements in commercial development, and to retaliate on new and undreamt-of methods of ferocity and barbarism in naval warfare. With far less justification during the American civil war, the United States made extensive innovations in its blockade of the Confederate States. Are we to make no innovations now?

What are the counts in the American indictment against our policy? They are four: (1) That instead of searching neutral vessels at sea for contraband we bring them into port and conduct the search there; (2) that our non-intercourse regulations as regards Germany based on the Order in Council of March 11 do not comply with the recognised essentials of a blockade, and are therefore not legally binding on neutrals; (3) that our Prize Courts in giving effect to Orders in Council are improperly enforcing what is not recognised by international law, and (4) that our announced intention of looking behind the flag which a vessel is entitled to fly to ascertain whether she is really enemy-owned is improper. These provisions, it is urged, illegitimately and unjustifiably curtail American commerce, and American citizens are evidently to be encouraged to seek redress diplomatically rather than through the British Prize Courts. This encouragement runs entirely contrary to the policy which this country recommends.

Every one of the American contentions is susceptible of complete answer. The diversion of neutral vessels into our ports for search is absolutely necessary if that operation is to be more than perfunctory. A systematic search of a big cargo liner at sea is a matter of extreme physical difficulty and, indeed, of impossibility in heavy weather. Under modern conditions of commerce when goods are consigned "to order," the papers give no clue to the ultimate ownership.

We take it that by far the most important contention in the American note is that which denies the legality of the Order in Council of March 11 instituting commercial isolation of Germany. The first observation we would make on this matter is that the American note ignores entirely the condition of things which brought it about. Germany had embarked on her submarine campaign, torpedoing wildly and indiscriminatingly passenger ships and cargo boats. We should have thought that this career of crime culminating in such events as the destruction of the *Lusitania* would not have been absent from the minds of the framers of the American note in drawing it up. Our Order in Council of March 11 was the reply. Its object was retaliatory and it aimed at the isolation of German commerce. It sought to respect the legitimate commerce of neutral States. What we have instituted is not a strict blockade on the

old technical lines. It is a modified blockade, modified entirely in favour of neutrals and adapted to deal with a peculiar and anomalous situation. The American note tests it according to the hard technical rules of the old blockade. The contention is that our procedure is not strict enough, not effective enough to be recognised as binding on neutrals. Objection is taken because it is not impartially applied to the ships of all nations inasmuch as the German ports are notoriously open to traffic with the ports of Denmark, Norway and Sweden, and because free access to neutral ports is infringed upon. We are not sure that the Baltic trade routes are now so open to German shipping in the easy manner which the American note implies. We do not suppose that it is suggested that the naval resources of Britain and her Allies are insufficient to close the whole of the North Sea and observe every technicality on which the American note lays stress. We are certain that American public opinion would condemn us if we did. Why, then, this insistence upon technical fulfilments in the American note ?

Of course, we must admit that the geographical position of certain neutral countries on the Western European seaboard presents difficulties. What would be their situation if the full and complete doctrine of the American note were given effect to ? We know that their Governments are sincerely desirous of maintaining their neutrality. But we ask any person of political insight whether this task of keeping themselves outside the vortex of European complication and struggle would be facilitated by permitting their ports to become the channels through which the resources of Germany would be replenished ? It would not. We have done what we can to allow the common stock of commodities in these countries to be renewed, and we believe with success. On the principle of retaliation against inhuman barbarity in sea warfare, we maintain we are morally and legally justified in isolating German trade by means of the Order in Council of March 11. Just as Lord Stowell deemed the Orders in Council in reply to Napoleon's Berlin decrees reconcilable with those rules of natural justice by which the international communications of independent States are usually governed, so do we deem the steps which we have taken to isolate German commerce fully justified. If the full enormity of the German submarine campaign is realised, the justice of our retaliatory action is evident.

We may remark in passing that the United States did not hesitate to put a strained construction on the law of blockade in 1861. Innovations to meet the special circumstances of the time were made by the American Prize Courts during the Civil War when they condemned such vessels for breach of blockade as knowingly carried to a neutral port cargo ultimately destined for a blockaded port.

As to the repudiation of the British prize law in the American note, we have only one comment to make. This we think will throw cold water on the suggestions that an Anglo-American Commission or tribunal should be set up to settle differences arising out of the administration of our prize law as regards ships and cargoes in which American citizens are concerned. With regard to our decision to look behind the flag which a ship is entitled to fly in order to ascertain the nationality of her owners, it is really a reversion to an old Anglo-American rule.

What strikes one in reading the American note is the reiteration of the statement that injury is being done to American shipping and commerce by the measures we have taken at sea. On the whole we are not disposed to think that American industries have languished during the war. Some of them are booming. We do not deny that neutrals unfortunately do suffer as the result of belligerent operations at sea. If we were asked to give a large and striking example we should mention the Lancashire cotton famine, when hunger and destitution were brought to our operatives because of the action of Federal cruisers. We recommend American critics of the present day to consider what the United States did in the past.

OIL-CARRYING BARGES ON THE THAMES.

THE Port of London Authority some five or six months ago issued a draft specification relating to oil-carrying barges on the Thames, and last week in a circular inviting certain interests to a conference to be held to-day (Thursday afternoon) a copy of this draft specification was enclosed, which, however, differed from that which was published in our issue of June 3 last in minor details. For example, one of the proposed regulations provided for the equipment of self-propelled barges with " an efficient sound signalling instrument and two sets of safety lamps of a pattern and design previously approved by the Port Authority." The proposal as to a sound signalling instrument has been abandoned, and in place of " two sets of safety lamps " has been substituted the more nebulous demand for " two sets of all necessary safety lamps," so one may presume that a subsidiary set of regulations will be issued dealing with this point.

These rules for oil-carrying barges—miniature oil tankers—must not be confused with the draft regulations for barges propelled with internal-combustion engines which the Port Authority issued about two years ago and which have so far not come to anything—unless it be grief. The proposals now under discussion relate to self-propelled barges not exceeding 500 tons capacity, and it is not clear whether this would not embrace a number of oil carriers employed on coastal service and which enter the Thames from time to time. The main objection taken to these regulations, however, is the demand that the barges, if self-propelled at all, must be propelled by an internal-combustion engine " of the Diesel type in which ignition is effected otherwise than by any form of spark, flame or hot bulb." The oil used must have a flash point not below 150° Fahr. (Pensky-Martens close test).

It will be seen, therefore, that the proposal definitely rules out such forms of low-power internal-combustion engines as already exist, and whatever the future may bring forward in regard to small Diesel engines—some interesting developments had been foreshadowed before the war—the present is not the time when the Port Authority can expect barge owners to obtain delivery. One might also ask what experience the Authority has had to determine the prohibition of hot bulb and other types which they so definitely condemn. For example, there are the two British Petroleum Company's boats the *Royal Standard* and *White May*, which have kerosene engines starting on petrol, with electric ignition. They have been running on the Thames for years. Then again there is a large number of this type running in the East, some of them, as is the case at Shanghai, being of 1,000 tons capacity. All or nearly all of these have hot bulb engines. There are also the coasting boats to which reference has already been made. Some have hot bulb engines and others have steam engines. Is it proposed to prohibit the one and allow the other ? Makers of internal-combustion engines naturally feel that the subject should hardly have been rushed through when so many of them are, under pressure of war work, unable to divert their attention to the question. We fear the Port Authority will be hard pressed to explain satisfactorily their action on the grounds of immediate or pressing danger. Moreover owners of barges and small coasting oil vessels would like some reassurance that the heavier expense of installing Diesel engines in preference to other types is justified in the light of experience gained on the Thames and at other ports, and not at the behest of petroleum experts whose knowledge of shipping requirements is limited.

Forbidden Sales.—The Bundesrat in its turn has forbidden sale or any manner of alienation of rights, in respect of merchantmen now owned by or under course of construction for any subject of the Empire. Infringement of this decree is punishable by three years' imprisonment and a fine of £2,500. The new law is declared to apply to any German in whatever part of the world, and even attempted sale is declared punishable. The Chancellor alone can grant exemptions, and he will announce when and to what extent this decree becomes inoperative.

ORGANISING THE ENGINEER STAFF OF NAVAL VESSELS.

[illegible] clock-work action which is required in a military body. Everyone must have a place in the work and drill of the division, and everyone must know his place. To make each man's station bill as simple as possible, so that he may be able to commit to memory without any great effort, his duties in all drills and in the work of the department, it should be so laid out as to confine him to one particular position of the department."

The writer then proceeds to describe the organisation and the watch, quarter and station bill for a ship of the *San Francisco* class. In those days the regulations did not permit the engineer's force to stand watch in four. It was customary to divide the engineer's division into three sections, and to split the second relief section into two parts when the division stood watch and watch for full power.

Since Captain Dyson's article was written, ships have increased greatly in size and power, and the engineer complements have grown from 120 men in the *Indiana* class to something like 280 in the *Delaware*. The regulations now permit steaming with watch in four in cruising, and much has been done in modifying and extending the organisation of the engineer departments to meet present needs. Much, too, has been written about the organisation of the engineer department on board ship. But the same lack of uniformity exists to-day as when Captain Dyson wrote, "It is hoped that the publication of the views and ideas contained in this article may bring out the views on the same points, and on any others relating to the subject, of other officers of the service that the organisations of the engineer division of our ships may be made more uniform."

Many vessels now have practically identical organisations; others differ radically. Some have excellent ones; while others are not so good. While the engineer officer should have a free hand in organising his division it would be of great value to him when commissioning a new ship to have as a standard on which to base his own organisation a description of an organisation which has proved satisfactory and stood the test of time; something by which he may profit from the experiences of others, that will relieve him of the necessity of devoting his time to experimenting with many details that have been tested out in other ships. With a good standard organisation completely worked out and published in pamphlet form, the engineer officer, after making such alterations as necessary, could distribute the pamphlets to his officers and petty officers, saving for himself an immense amount of labour.

Another advantage in standardising the organisation would at once be apparent to officers and men when transferred from one ship to another, namely, their familiarity with it, enabling them quickly to fall into their new duties. The author believes the advantages so far outweigh the disadvantages that officers should put aside their hobbies and adopt some uniform system in future. The same argument applies to the incessant changes and alterations going on everywhere. Not that he was opposed to progress, but rather that the endeavour should be made to attain perfection in the use of the appliances at hand and not waste too much time in experimenting.

In all United States battleships the several deck divisions are divided into four sections, and, until recently, all the engineer divisions were divided into four sections. In some of the engineer departments the organisation of the four sections was defective, and [illegible] the [illegible] arrangement was suggested, and was adopted in a number of vessels. The next step was the [illegible] of a six-section organisation for the engineer division. The four-section arrangement was he thought correct, if properly made, and as it fits in with the regular organisation of the ship it is difficult to see why it should ever have been abandoned.

Another suggestion that recently has been made is that of dividing the engineer department on board ship into three divisions of four sections each, the senior engineer officer being the head of the department, with three divisional officers under him. This seems reasonable. The logical arrangement then would be, one division to consist of the fire-room stations, one of engine-room stations, and another for all other stations, each division being divided into four sections for watch standing. This arrangement is applicable to the existing organisation with very few modifications.

NEW AMERICAN STEAMERS FOR FOREIGN COAL TRADE.

The steamer *Franklin*, general arrangement drawings of which appear below, is the seventh of a series of 14 steamers built or building by the New York Shipbuilding Company, Camden, New Jersey, for the Coastwise Transportation Company, of Boston, Mass., and it cleared on September 29 with 6,500 tons of coal for Alexandria, followed a few weeks later by a sister ship, the *Plymouth*. The *Franklin* is the first of three steamers built for foreign business under the American flag to be used on charter with the Consolidation Coal Company. Including the *Plymouth*, eight vessels of the fleet have been delivered, and these, with the remaining six, will have a total coal cargo carrying capacity of about 94,000 long tons.

The vessel has the following dimensions:—

Length, o.a.	395 ft.
Breadth	55 ft.
Depth	34 ft. 6 in.
Draught, loaded	27 ft.

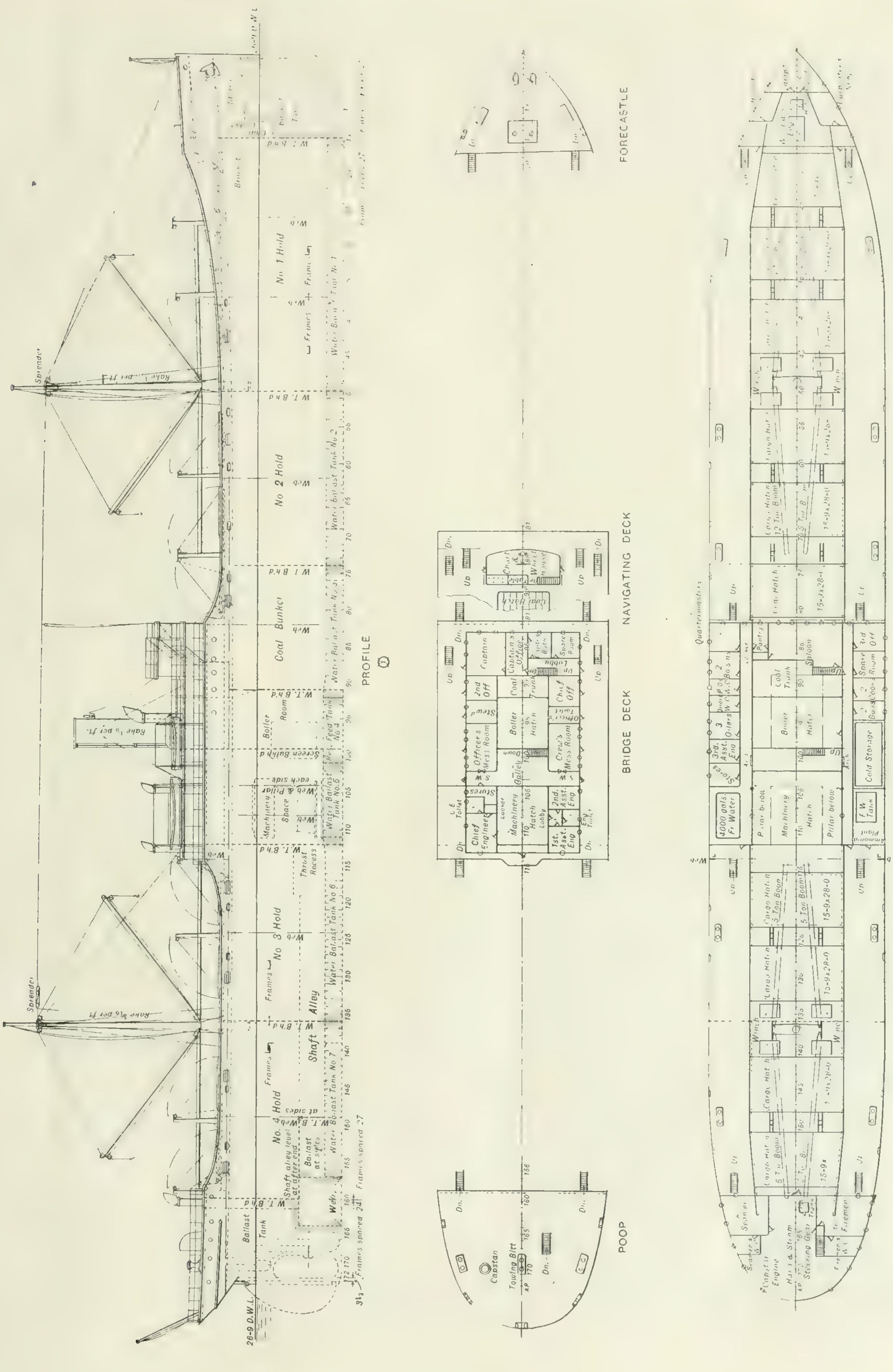
The *Franklin* has been built with machinery amidships and arrangements for discharging her own cargo, which will be delivered at Mediterranean ports; unusually large bunkers have been fitted, to enable the vessel to make the voyage from Norfolk, Virginia, to the Mediterranean and return. In order that the return voyage may be safely made with little or no cargo, ample ballast tanks have been provided in the double bottom and peaks.

She is built to take the highest class in Lloyd's Registry and under their special survey. Engines of 2,300 h.p. will maintain an average of 11 knots at sea with single screw. Steam is supplied by Scotch boilers and forced draught. On the trials, a speed of 12½ knots in ballast condition was obtained.

The vessel will carry a total deadweight of 8,750 long tons. The gross tonnage is 5,266. The hatch arrangement follows the design so successful in the American coastwise trade, *i.e.*, large steel single-piece covers with king posts and wire rope hoists. There are two masts, with steel tubular booms, and winches are fitted.

The officers and crew are comfortably berthed amidships and aft, all quarters being on the upper and bridge decks.

Naval Architect's Spring Meetings.—The dates for the next annual meetings of the Institution of Naval Architects will fall on Wednesday, April 12, 1916, and the two following days. The Council will be pleased to consider papers on subjects relating to naval architecture or marine engineering. Such offers (or suggestions for papers on matters of interest to the Institution) should, if possible, be sent in by the close of the year to Mr. R. W. Dana, Secretary, 5, Adelphi Terrace, London, W.C.



General Arrangement of One of the New Steamers built by the New York Shipbuilding Co., Ltd., Camden, New Jersey, for the Coastwise Transportation Co., Boston.

The Vessels are to be used to develop the Coal Export Trade of the United States.

DAMAGE TO A CARDIFF STEAMER.

On pages 417-18 we reproduce some photographs illustrating the damage sustained by a Cardiff-owned steamer. The vessel, which is a steel screw steamer, 3,105 tons gross, was on her first voyage, as the property of W. E. Hunt & Co., of Cardiff, who had purchased her from J. Wood & Co., West Hartlepool. The interior of the vessel was badly injured, the No. 1 forepeak and No. 1 hold being extensively damaged and the forepeak bulkhead partly shattered. The vessel, with the aid of tugs, successfully reached her destination where she was dry-docked after discharging her cargo and temporary repairs effected. A wooden patch, 30 ft. long by 24 ft. deep, which was fitted to the ship, was made solely by hand, and so successfully attached to the vessel that she was able to load a fresh cargo and proceed to port, where she was discharged, and subsequently sailed for Cardiff, where she was safely dry docked by the Mountstuart Dry Docks, Ltd. The temporary wooden patch attached was made up of vertical wooden beams spaced about 2 ft. apart and connected with horizontal beams which were planked over on the outside and caulked and paved. On completion, this patch presented the appearance of the ordinary planking of a wooden ship. The damage sustained by the vessel will necessitate the renewing or fairing of some 30 shell plates and 26 deck and other plates, renewal of about 25 new frames, several deck beams, about a dozen floors in the No. 1 tank, besides a new windlass on the forecastle deck and a new winch on the main deck, both of which were shattered by the force of the explosion. The repairing is expected to take until the end of the month, the work being estimated to occupy about seven weeks. The Mountstuart Dry Docks, Ltd., Cardiff, are carrying out the repairs according to the instructions of Mr. T. Frank Appleton, Consulting Engineer and Marine Surveyor, Cardiff, who is acting for the owners. The ship was built by W. Gray & Co., West Hartlepool, and launched in October, 1905.

GERMAN OVERSEAS SERVICES.

The optimistic views recently expressed at Hamburg and Bremen respecting the future of German shipping overseas are not, we need scarcely say, shared on this side of the North Sea by careful observers of maritime developments. With Herr Ballin and Herr Heineken it may, indeed, simply be a case of whistling to keep their courage up; for evidence of which they must be as well aware as others, is gradually accumulating to show that, unless the German lines are prepared to play a desperate financial game—assuming they have sufficient money for the purpose when the war comes to an end—these operations will be very seriously curtailed. Memory is, of course, notoriously short, but the present struggle will leave such a world-wide mark that it should be many years before reciprocal relations are re-established between the warring nations. Apart altogether from any weakening in this country, there is, for instance, good reason to believe that opinion in our overseas Dominions against German traders has hardened to such an extent that tariff barriers are likely to be erected against them. Then, the loss of their own Colonial possessions is a factor which German shipowners would do well not to under-estimate, while it will probably take a long time before the sinking of the *Lusitania* and other passenger vessels is forgotten in the United States, to say nothing of the numerous claims by American citizens for the return of passage money that are still unsatisfied. More important, however, is the fact that the Russian Government has already determined that Germany shall no longer control Russian emigration through German or Dutch ports, which will, of course, be a heavy blow to the Hamburg and Bremen companies, most of whose vessels have been specially equipped for this class of traffic. Again, we hear of a scheme which is now under consideration with a view to the elimination of German ships from the Russian-Australian trade. Prior to the outbreak of hostilities it was usual to send goods from the Commonwealth to Russia, and vice versa, by German steamers, Hamburg and Genoa being the ports of transhipment by other German boats to Petrograd or Odessa, as the case might be. Now, it is proposed to maintain a service between Australian ports and Vladivostok, connecting at Hong Kong with Russian lines to the Far East from the Baltic and the Black Sea. Shippers will thus have alternative routes, either by the trans-Siberian Railway, or by sea to or from Europe, via Hong Kong. If events develop as anticipated, the Near East should also in future be largely closed to Teutonic enterprise, but, as far as can be ascertained, there is an opening for it in South America. British shipping and commercial interests will, however, be greatly to blame if they allow their enemy competitors to take much advantage of the opportunities there.

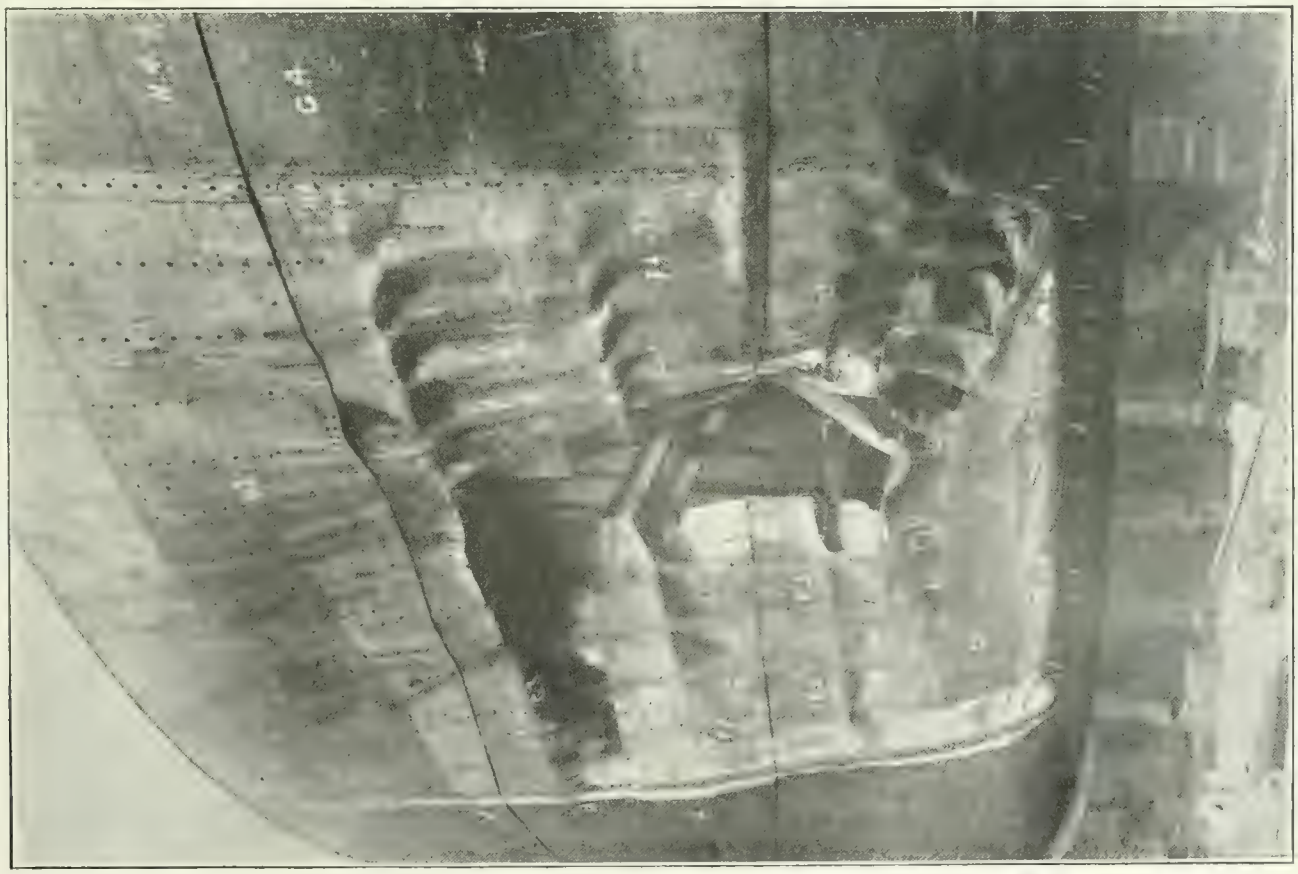
THE SALE OF SHIPS.

Restrictions upon the sale to foreigners of British vessels, and British prizes of war, have been so severe that, except in the case of French buyers, with whose Government a special arrangement exists, very few transactions of the kind have so far taken place. This prohibition is, of course, ostensibly intended to prevent British tonnage from getting into the hands of neutral firms for the benefit of enemy traders, and also to stop both Austrian and German companies—in this connection neither Turkey nor Bulgaria counts—from obtaining ships in order to make good their shortage when hostilities come to an end, although for all immediate purposes they should have quite enough available, even if those lying at American and other ports are not at once released. To a very large extent it has also been of assistance to British owners in view of the practical stoppage of mercantile work at the principal shipbuilding centres. We now learn that Spain has decided to refuse the transfer of vessels on the national register to foreign flags. The demand for those of good size has, in fact, been so brisk that the Government of that country has been compelled to take action in the matter, so as to protect its trade interests. Holland, too, is following a similar example, but, apparently, the restriction applies in the case of belligerent nations only, and should a neutral purchaser be resident in one of the countries at war, the Government of it must sign a declaration to the effect that the vessel will not be used for any military purpose while hostilities are in progress. These stipulations we can quite understand; not so, however, that of the Austrian Government, which has issued a decree forbidding the transfer of the ownership of Austrian merchant ships, wholly or partially, to foreign States, or to the subjects of foreign States, without the special sanction of the Minister of Commerce. As navigation in and out of the Adriatic is effectively controlled by the Allied Fleets, how are transactions of the kind possible? Austrian vessels at British, French, Russian or Italian ports have, doubtless, already been seized, whilst the activities of those fortunate enough to be in neutral waters must by now be severely crippled. The decree may, of course, apply to Austrian tonnage in Greece, Turkey or Bulgaria, but whether so or not it does not appear to have much value.

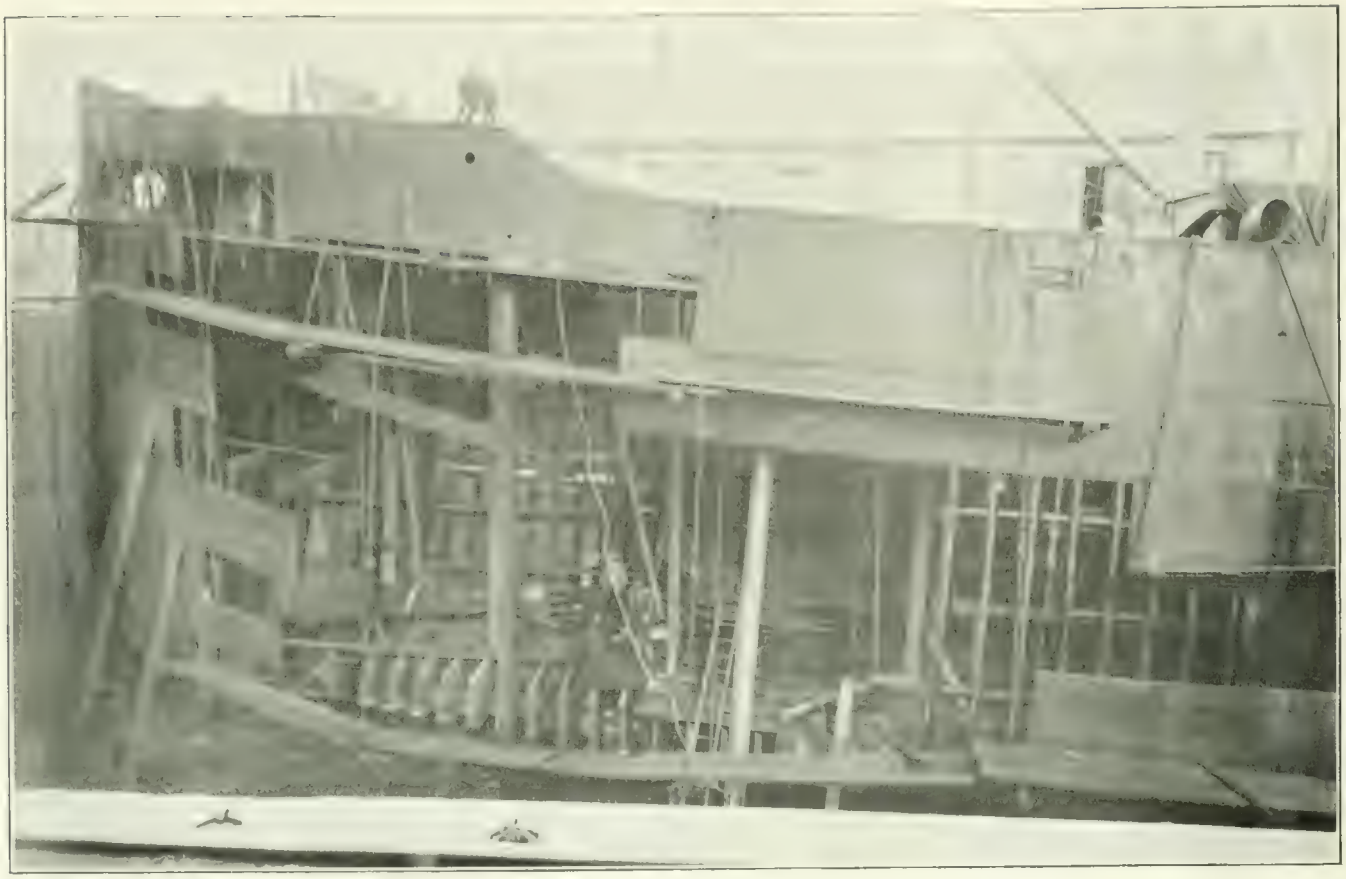
Congestion at Docks. — The Prime Minister has appointed a Committee to inquire into the difficulties and congestion arising from time to time at harbours, ports, and docks (including dock sheds and warehouses) in the United Kingdom, to regulate the work and traffic thereat, to co-ordinate the requirements of all interests concerned so as to avoid as far as possible interference with the normal flow of trade, to decide all questions relating to difficulties and congestion aforesaid that may be referred to them, and to give directions to all executive bodies at harbours, ports, and docks for carrying their decisions into effect. The Committee is constituted as follows:—Lord Inchcape, Chairman; Mr. Graeme Thomson and Major T. H. Hawkins, Admiralty; Brigadier-General the Hon. A. R. Montagu Stuart-Wortley, War Office; Sir Frederick Bolton, Mr. J. Broodbank, Sir Sam Fay, Sir Edward Hain, and Sir A. Norman Hill. All communications should be addressed to the Secretary, Sir Frederick Dumayne, Board of Trade, Whitehall, London.

DAMAGE TO A CARDIFF STEAMER: REPAIRERS—THE MOUNTSTUART DRY DOCKS, LTD., CARDIFF.

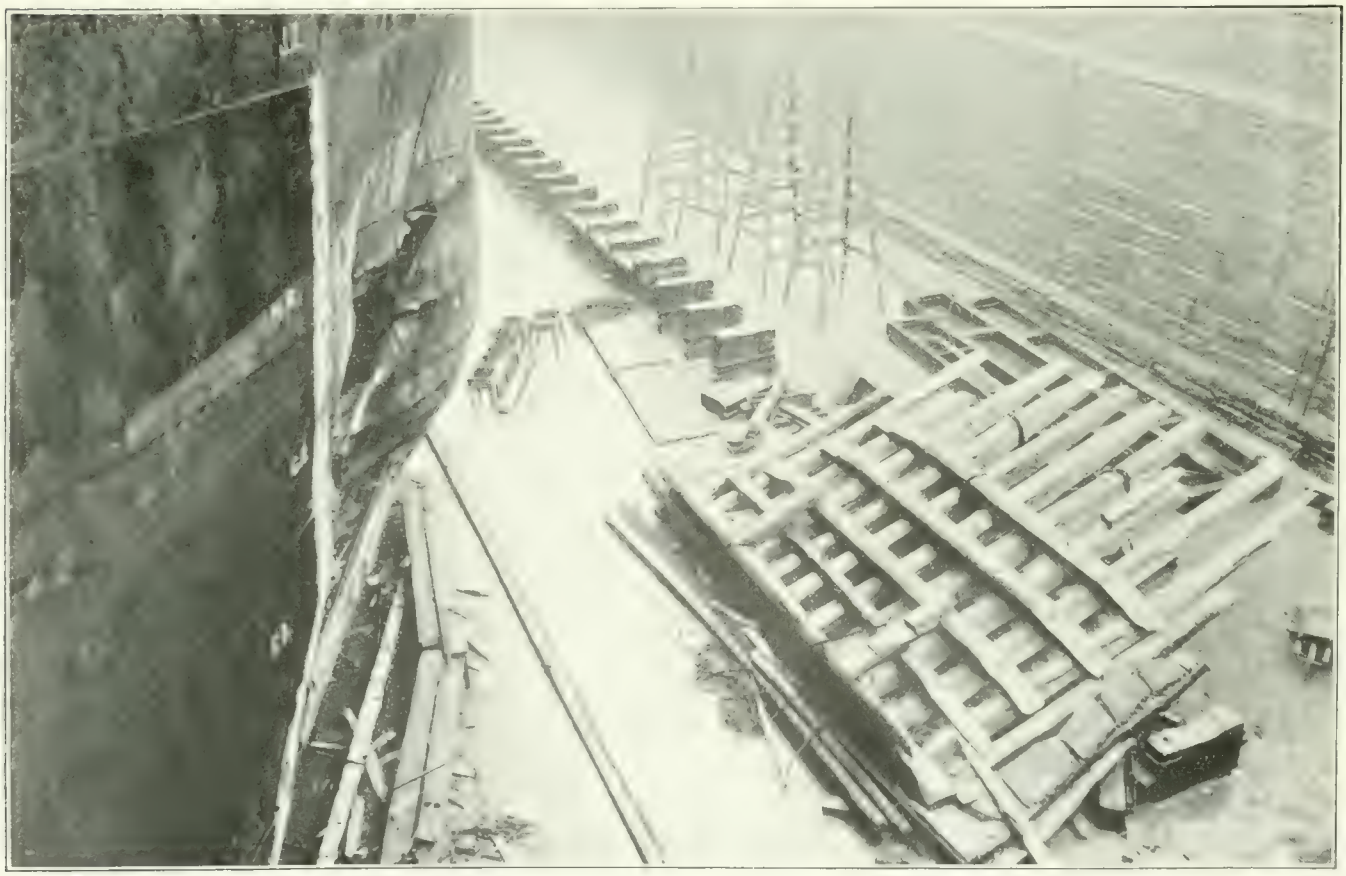
View taken from the Hold Looking Outwards.



View of Damaged Side after Temporary Patch had been Removed. Some of the Bolts Used for this Patch are Shown.



View of Port Bow Showing Extent of Repairs Necessary.



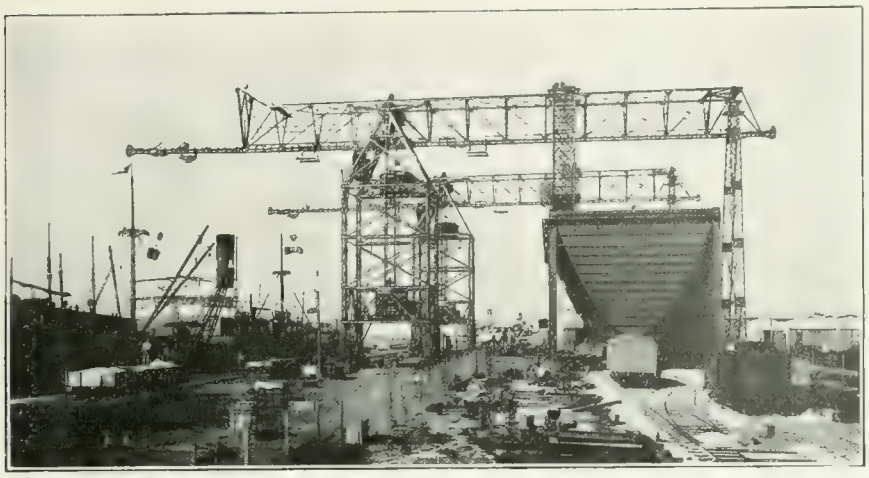
Another View of the Damage. Lying at the Bottom of the Dock is the Temporary Wooden Patch Used to enable the Vessel to voyage to this Country. (*See page* 416.)

DOCK AND HARBOUR EQUIPMENT.

CRANES AND TRANSPORTERS FOR THE DOUBLE DUTY OF LOADING AND DISCHARGING COAL.

II.

In the preceding article* attention was drawn to adaptations of the Temperley transporter, two examples being given. One was the case where it was necessary to coal vessels in a harbour by means of a small coaling vessel and lighters alongside. The other instance was one providing for a floating coal elevator and transporter for handling coal either from lighter or collier, and delivering it into steamers' bunkers at 100 tons an hour.



Two Bridge "Temperley" Transporters with Travelling and Slewing Motions, Unloading Coal ex Steamers into Land Bunkers.

The next example is that of transporters of the "Bridge" type, which were constructed by Sir William Arrol & Co., Ltd., Glasgow, for unloading coal at Buenos Ayres. The duty to be performed was to grab the coal arriving in colliers alongside the quay, transport it over the railway track and roadway, weigh it, and then deposit it into the steel bunkers under the land side of the transporters. Railway trucks are then brought alongside the bunkers and loaded by chutes.

This installation has some novel features, being pivotally supported on two independently self-propelled supports so that the complete machine can be readily travelled to where required and placed at any angle up to 10 deg. on either side of the normal. It will therefore be seen that a greatly increased area can be commanded both on the land and water side. Thus, if the hatchway of the vessel to be unloaded is not in a direct line with the point in the bunkers at which it is desired to discharge, the front support of the transporter is moved into position without moving the back support. In addition to the advantage thus obtained, a saving in electric current is effected.

The grab used on these transporters (which are equally suitable for working with skips) contains 30 cwt. of coal.

An electrically-driven travelling hopper weighing machine travels along the bridge girder over the steel coal bunkers, and the grab discharges into this. In order to prevent breakage of coal the frame of the weigher is made telescopic and can be raised or lowered to any height desired, thus reducing the drop of the coal to a minimum.

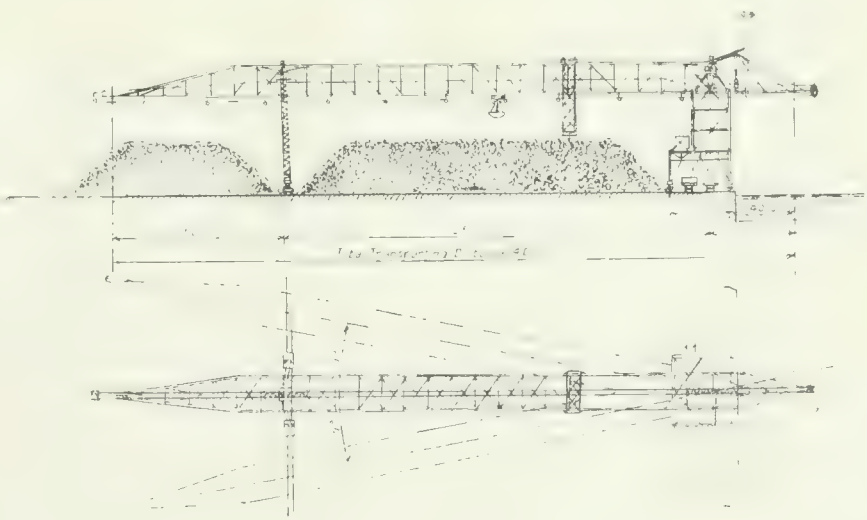
The total height of lift is 80 ft., the total transporting distance 198 ft., and the machinery is designed to give a speed of working of 40 round trips per hour.

A similar machine is shown in the accompanying elevation and plan but is a much longer machine, the total transporting distance being 405 ft., and the grab takes a load of 2 tons of coal. The front tower runs on a line of rails having a gauge of 35 ft., thus allowing a double line of trucks to pass through. A hopper is fixed to the tower, from which the trucks are loaded by two chutes, or the grab deposits the coal on to the open coal store indicated. This transporter is fitted with a travelling weighing machine, and the cantilever portion over the water is arranged to hinge up to be clear of the masts of vessels coming into position for unloading.

In yet another example (see illustration on page 420) machinery was required for the discharging household coal from small colliers or barges, transporting same over a roadway and depositing it into any part of an open ferro-concrete coal store having an approximate total capacity of 15,000 tons.

To do this work two Temperley bridge transporters were installed on the walls of the store, as illustrated, fitted with grabs having a capacity of 1·25 tons of coal, and here again, special requirements had to be met.

It is particularly important in dealing with household coal that it shall not be broken, and grabs with plain cutting edges were used. This also prevents damage to the wooden coamings of the vessels and barges. The grabs being of the three-rope suspension type, the coal can be dumped at any point in the height of lift, and therefore in discharging its load the grab is brought to within a foot or two of the coal heap, and on opening the grab the coal runs out with the absolute minimum of breakage.



Elevation and Plan of Temperley Transporter with Travelling and Slewing Motions.

The second point to be noted is that the rail tracks vary in centres 6 ft. 6 in., owing to the walls not being quite parallel, and to overcome this difficulty the water-side frame is rigidly connected to the track girder, whilst the land-side frame is connected to the girder by means of a spherical bearing which compensates for the variation mentioned in the centres of the rail tracks.

* *Shipbuilding and Shipping Record*, November 4, 1915, pp. 397–98.

The third point is one particularly interesting to electrical engineers, due to the fact that the current is single phase, and, so far as the writer is aware, nothing of the kind has ever been previously contemplated on this class of current. Separate motors are used for each operation, viz., hoisting, transporting, travelling and slewing frame, the sizes varying from 10 to 65 h.p.

Owing to the speed of working, viz., 60 to 70 trips per hour, the working conditions of stopping, starting, &c., are more severe than with ordinary cranes or lifts. The saving in labour is very large, one man only being required to work each transporter, and an additional saving is effected by the prompt discharging of the colliers, which are frequently able to save a tide, a considerable advantage when boats are on time charter.

A particularly interesting example of the method of discharging coal arriving at a foreign port, placing it in store, and then bunkering steamers as required when arriving in harbour may here be given.

Owing to the formation of the harbour, vessels with a few exceptions cannot be brought alongside the existing quays, therefore the coal on arriving has first to be discharged into special barges which are brought alongside the colliers, and when loaded are towed to the quay, where the coal is unloaded and placed over a large area used as a coal store. The operation is reversed when bunkering. From the very nature of the work, it will be realised that quick working is absolutely essential. The method of dealing with the problem is as follows, using a combination of floating cranes and a transporter.

Two steam cranes, of a radius of 49 ft., fitted with hoisting and slewing motions, have been fixed on separate wooden pontoons. The cranes are of the double-drum type, for working a Temperley grab. This enables the load to be grabbed or discharged at any height desired. The pontoon with the crane is towed alongside the vessel to be discharged or bunkered, and placed between the vessel and the coal barges to be unloaded or loaded. The grabs supplied with the crane are of two sizes, viz., to take 1 ton of coal, and a larger size to take 1½ tons, the size used depending upon the hatchway of the vessel.

The crane is designed for quick working, and from 40 to 45 complete cycles of operations per hour are being performed. It should be noted that in actual bunkering with the larger grab 74 tons per hour have been loaded, but this speed has been found too great in some cases owing to the bunkers becoming choked.

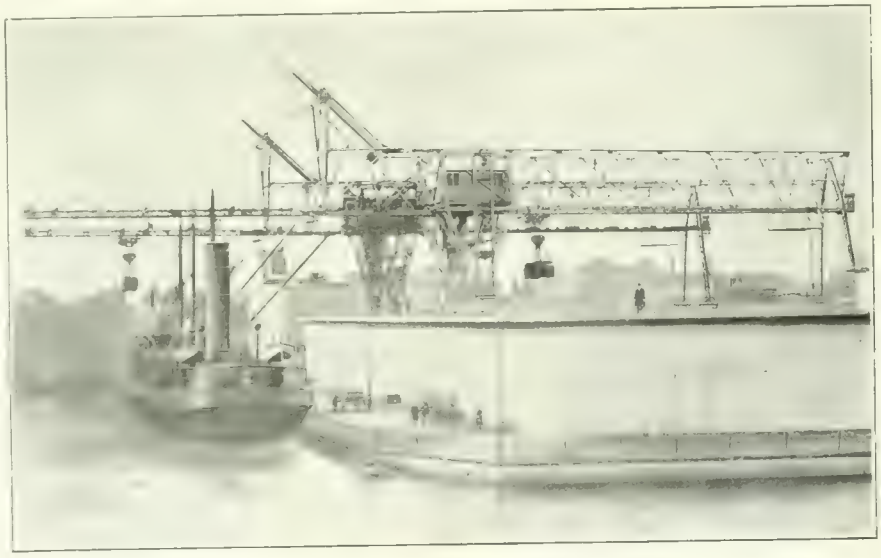
Fixed Steam Crane with "Temperley" Grab on Floating Pontoon, used for Unloading Coal from Vessels into Coal Barges, or vice versa.

Two floating cranes were supplied, and the cost of working is extremely small, only a man and a boy being required to work the crane, stoke the boiler, &c., and two or three men in the barge to trim the coal.

When the barges containing the coal discharged are brought alongside the quay of the coal depôt, the coal is grabbed out of the barges by a Temperley transporter, and deposited over the coal store. Steam power is again used, electricity not being available. The transporter is, of course, used when loading coal ex store into barges.

The above illustration shows the type of crane used, the transporter being of the "Bridge" type, which also formed the first example on the preceding page.

(To be concluded.)



"Temperley" Grab Transporters on Walls of Coal Store, unloading Household Coal into Open Store.

U.S. Seamen's Act and Boat Davits.—Under the provision of the Seamen's Act which comes into force in November, as far as American vessels are concerned, steamers are compelled to be fitted with gear of sufficient power to turn out davits against the maximum list under which it is possible to lower lifeboats. It is understood that the Department of Commerce will hold that nothing but a mechanical gear attached to the davits will suffice; therefore, ordinary block and tackle attached from the end of the davit to the rail will not be considered by the authorities to constitute "gear" within the meaning of the Act. It also appears that the Department will require mechanical gear on cargo steamers wherever it is practicable to fit it so that an additional burden will be imposed upon shipowners.

GENERAL NEWS SECTION.

PERSONAL.

Mr. Robert Duncan, Kingsborough Gardens, Glasgow, formerly shipbuilder and latterly lieutenant, Royal Naval Volunteer Reserve, who died at the Dardanelles, left £10,872.

Sir James Mills, K.C.M.G., Chairman of the Union Steamship Company of New Zealand, has been elected a member of the Committee of Management of Lloyd's Register of Shipping.

Captain W. Finch, Lieutenant R.N.R., late master of the White Star liner *Arabic*, has been awarded by the Board of Trade a piece of silver plate in recognition of his exemplary conduct when his vessel was torpedoed on August 19.

Mr. E. A. F. T. de Mattos, of Hinton, Tunbridge Wells, Kent, of the Cardiff coal exporting firm of Messrs. de Mattos & Co., who died on July 30, 1915, aged 79 years, left estate of the gross value of £29,815, of which £28,414 is net personalty.

Captain W. K. Campbell, Royal Army Medical Corps, who was wounded in Flanders recently is a son of Mr. Wm. Campbell, Glandore and Belfast, who for many years held an important position with the firm of Workman, Clark & Co., Ltd.

Sir Thomas Dixon, Bart., of the Irish Shipowners' Co., Belfast, and Lady Dixon have presented a motor ambulance to the 36th (Ulster Volunteer) Division of the New Army in France, for service with 109th Field Ambulance.

Lieut. J. B. Hollwey, Royal Field Artillery, who was awarded the Military Cross last week, is a son of Mr. John Hollwey, who recently retired from the chairmanship of the Dublin Port and Docks Board. Lieut. Hollwey was wounded in the last advance, and is now in hospital in London.

Mr. Maxwell K. Moorhead has been appointed United States Consul at Swansea in succession to Mr. W. L. Jenkins. Mr. Moorhead is at present the United States Consul at Rangoon, and has held similar positions at St. John, N.B., Acapulco, Belgrade, and St. Thomas (Ontario).

The Board of Trade have awarded a piece of plate to Mr. Vincent Hervis, Master of the French schooner *Alfred Jeanne*, of Nantes, in recognition of his services in rescuing 19 members of the crew of the steamship *Hesione*, of Liverpool, in the North Atlantic Ocean, on September 25, 1915.

The Board of Trade have awarded a piece of plate to Mr. Justus Gerhardus Knypenga, master of the Dutch steamship *Minister Tak*, of Amsterdam, in recognition of his services to the shipwrecked crew of the trawler *Nimrod*, of Lowestoft, whom he rescued in the North Sea on September 10.

The Board of Trade have awarded a piece of plate to Mr. Cornelis de Groot, skipper of the Dutch steam trawler *Verano*, of Ymuiden, in recognition of his services to the shipwrecked crews of the trawlers *Constance*, *Emblem*, *Emmanuel* and *Victorious*, of Lowestoft, whom he rescued in the North Sea on September 8.

The Board of Trade have awarded a piece of plate to Monsieur Alfred Gérin, Director of the French Company, Sahel Tunisien, in recognition of his services to the shipwrecked crew of the British steamship *Natal Transport*, which was lost in the Mediterranean on September 4.

Chief Officer Harold Oswald Read, before joining the steamer *Anglo-Saxon*, was on the deck of that vessel, before the officers and crew, last week at Cardiff presented with a gold watch on behalf of the Lords of the Admiralty by Capt. Parker, Admiralty Office, Cardiff. The watch was inscribed as follows: "Presented by the Lords of the Admiralty to Harold Oswald Read, chief officer of the *Anglo-Californian*, in recognition of his gallantry on the occasion of the attack on his vessel by an enemy submarine on July 4th, 1915."

The Board of Trade have received, through the Norwegian Consul-General, a piece of plate for Mr. Gilbert Symons, master, and a silver medal for Charles Short Murrish, able seaman, of the steamship *Cloch*, of Penzance, which have been awarded to them by His Majesty the King of Norway, in recognition of their services in rescuing three members of the crew of the Norwegian steamship *Waterloo*, of Tönsberg, which foundered off the Lizard on December 5, 1914. The Board have also received the sum of £75 from the owner of the *Waterloo*, for distribution amongst the crew of the *Cloch*.

Major Adrian Charles Gordon, who has been appointed a Companion of the Distinguished Service Order, is the second son of Mr. C. W. Gordon and a partner in the Gordon Steam Shipping Company. He is a well-known figure on the Baltic, where the news of his decoration has been received with considerable pleasure. Major Gordon is attached to the 16th County of London Battery 6th London Brigade, R.F.A. At Maroc on September 25 last he got close up to the German lines to reconnoitre, and, although under heavy fire, captured 12 Germans, after shooting one man with a revolver. On the afternoon of the same day he again went up to and reconnoitred the enemy's second line under very heavy fire. On the following day he rendered valuable service at Loos in reorganising men who had become detached and taking them to the firing line.

Lieutenant Geoffrey Alban Hattersley-Smith, R.N., H.M.S. *Lark*, aged 26, son of the Rev. P. Hattersley-Smith, of Glenfall Lawn, Cheltenham, died from dysentery at the Royal Naval Hospital, Devonport, on November 1. According to a personal note in *The Times*, he was educated at Glyngarth, Cheltenham, and at Cheltenham College, where he gained a scholarship in 1901. In 1903 he joined the *Britannia*, becoming a midshipman in 1906, and securing a first-class in seamanship at his examination, When the war broke out he was serving on the Cape Station in H.M.S. *Pegasus*, but escaped injury when that vessel was bombarded by the *Königsberg*, while undergoing repairs and temporarily *hors de combat* in Zanzibar Harbour. As a result of subsequent operations ashore, he was in hospital at Zanzibar with a severe attack of dysentery, and it was a recrudescence of this which led to his death. On his return to England he declined to take more than a fortnight's leave, and was appointed first lieutenant of H.M.S. *Lark* (t.b.d.), in which ship he saw a good deal of useful service in the North Sea and elsewhere, being present at the Dogger Bank and other engagements. Last year he was awarded a Royal Humane Society's medal for saving the life of a stoker in Lamu Harbour on a dark night when a strong tide was running. On a recent occasion, when the *Lark* and sister ships sank two German destroyers, several German sailors were saved. Lieutenant Hattersley-Smith, seeing one of them sinking, went in after him and brought him aboard.

The annual election of members to the Clyde Navigation Trust will shortly be made, but it is probable that there will be few, if any, changes in the *personnel* of the Trust this year. As a result of the passing of the Elections and Registration Act, 1915, all the members chosen by the town and county councils will be returned, and it is almost certain that there will be no contest in connection with the

[illegible] of representatives by the shipowners and harbour rate-payers. The following is a list of the Trustees who retire this year: Mr. William Robertson, Mr. William J. Anderson, Mr. James S. Craig, Mr. David Shields, Mr. Marcus Robinson, and Mr. G. W. Stevenson, all representatives of the shipowners and harbour rate-payers; Sir Thomas Mason, representing the Merchants' House; Mr. Robert J. Dunlop, representing the Chamber of Commerce; and Mr. Andrew Macfarlane, representing the Trades House of Glasgow.

The Council of the Institution of Civil Engineers for the year 1915–1916 is composed of the following:—

President: [illegible] Vice-Presidents: [illegible] Sir Maurice Fitzmaurice, C.M.G., M.A., M.A.I., LL.D.; Sir Dugald Clerk; Sir William Ellis Jones, M.Inst.C.E.; [illegible] Vice-Presidents: [illegible] Sir James Mansergh, K.C.B., LL.D., F.R.S.; [illegible] Vice-Presidents: [illegible] M.A.; [illegible] Vice-Presidents: [illegible] Sir Thomas Hedley Mason; Sir Hay Frederick Donald, K.C.B.; William Henry Dorman; [illegible] M.A.; Sir Robert Abercrombie Hadfield, F.R.S.; [illegible] Sir William Matthew, K.C.M.G.; Past Presidents: William Henry Maw, LL.D.; [illegible] Sir Henry Trueman Wood, K.C.B., F.R.S.; [illegible] C.I.E.; [illegible] Sir Alexander Kennedy, Sir Henry Fowler, M.A., B.A.I.; William Cawthorne Unwin, F.R.S., LL.D., F.R.S.; Past Presidents: Sir Philip Watts, K.C.B., LL.D., F.R.S.

THE ADVANCE IN OUTWARD COAL FREIGHTS.

Ever since the withdrawal of Greek tonnage from the market which took place at the close of September, the shortage of shipping has become more and more pronounced. Early in October official news was received that the Panama Canal had been "blocked" by a landslide and would not be opened until early in the new year. This naturally further accentuated the tonnage scarcity as a number of large vessels were thus held up. To-day the position is as acute as ever, and a daily perusal of the lists of vessels arriving and sailing at the United Kingdom ports will testify to the great need of increasing supplies of tonnage. Freights as a result, despite export restrictions, have steadily risen and almost daily new orders are created. In fact, the freights now obtainable are the highest ever reached in the history of the steamship and the likelihood is that a further advance is to be expected. The following table showing the highest and average rates from Cardiff or Newport during the past three months and current rates are ample evidence of the upward trend of freights:—

1915.

Cardiff or Newport to	August.		September.		October.		
	High.	Aver.	High.	Aver.	High.	Aver.	Current.
Alexandria ...	30/-	27/-	36/-	32/9	45/-	44/6	48/-
Adriatic			[illegible]	35/-	49/6	49/6	52/6
Buenos Ayres	29/-	22/11	30/-	25/17	[illegible]	29/8½	30/-
Genoa	[illegible]	24/1	[illegible]	31/4	45/-	40/2½	47/-
Havre	14/-	12/9	15/6	14/4½	16/-	14/8¼	16/3
Marseilles (fr.)	32/½	28/6	48/-	38/¼	55/-	45/-	58/-
River Plate ...	29/-	22/6½	30/-	27/4½	45/-	40/5¼	37/6
Rosario	17/-	14/11	17/-	16/-	18/-	16/9¾	18/-

The upward movement, as noted above, has also taken place from the Tyne, while homeward freights from all directions show an appreciable advance. Whether the Government's new scheme will fulfil the expectations of the drafters and reduce freights remains to be seen.

FORTHCOMING EVENTS.

[illegible] Institution of Mechanical Engineers.—Friday, November 12.—Meeting at the Institution of Civil Engineers, Great George Street, Westminster, at 8 p.m. Papers: "The Characteristics and Mechanical Reactions of Iron, Molybdenum and Carbon," by J. O. Arnold, D.Met., F.R.S., [illegible] of Sheffield, and A. A. Read, D.Met., F.I.C., Professor of Metallurgy in the University of Wales. [illegible] "Cast Iron in Large Steel Furnaces," by J. O. Arnold, D.Met., F.R.S.

[illegible] Society.—Tuesday, November [illegible]—Meeting at Great George Street, Westminster, S.W. Paper: "The Punjab Triple Canal System," by Sir John Benton, K.C.I.E., M.Inst.C.E. [illegible] In [illegible] instances, the time of the ordinary meetings is changed temporarily from 8 p.m. to 5.30 p.m.

SHIPPING AND EXCESS PROFITS.

Further Discussion in Parliament.

In the debate on the Finance (No. 3) Bill in the House of Commons on November 3, Mr. Houston moved an amendment exempting shipowning from the excess profits tax. In the course of his remarks he said that since the outbreak of the war shipping had contributed more largely to the needs of the country than any other business on account of the large number of steamers which had been requisitioned by the Government at rates of freight which were very low indeed compared with what were obtainable on the open market and the rates which neutral tonnage was commanding. The existence of the nation depended upon her merchant shipping, and it had never received any aid from the Government to help in the fight with foreign shipping, which did receive such aid. This war depended upon merchant shipping. The Prime Minister, the preceding day, said that since the war began, the transport department of the Admiralty, for the Army alone, had carried 2,500,000 officers and men, and 320,000 sick and wounded and nurses. They had carried, further, 2,500,000 tons of stores and munitions, and 800,000 horses, mules and camels. Up to the present the loss of life in the whole of these gigantic oversea operations had been considerably less than $\frac{1}{10}$th per cent. He (Mr. Houston) suggested that the Prime Minister was not altogether disingenuous when he made that remark and credited the Transport Department of the Admiralty with this magnificent performance. The whole of this performance was carried out by the merchant shipping of this country under the direction, it was true, of the Admiralty. In addition to this service which the merchant shipping had performed, and which, as the Prime Minister pointed out, was service for the Army, our merchant shipping had enabled the Navy to carry out its magnificent successes. It had supplied to the Navy the auxiliary cruisers, the patrol vessels, the mine sweepers, the mine layers, the colliers, the oil tankers, and last, but not least, the dummy battleships which had been very useful in connection with the operations of the war.

Requisitioned Vessels.

It was difficult to obtain correct information regarding the number of steamers taken by the Government, but he thought he could safely say that the figure was about 4,000 vessels of all classes. The Admiralty, in correspondence with himself, admitted that of certain classes of ships 75 per cent. of those classes had been taken, and of regular liners whole fleets had been taken with the exception of some of the older and smaller vessels. Within the last month the Government had taken up shipping to the extent of 500,000 tons of cargo space, and this at a time which synchronised with the blocking of the Panama Canal, holding up 84 ocean steamers on both sides, representing about 400,000 tons of cargo capacity. The total number of steamers on the British register of 1,000 tons net and upwards was 3,767, representing a net registered tonnage of about 10,500,000 tons. Out of these 3,767 vessels there are only 2,662 ships of 2,000 tons net register and upwards. Out of these 3,767 vessels the Admiralty appeared to have taken something between 1,500 and 1,800 ships, leaving the remainder to carry on not only the whole service of the overseas trade of this country, but, under the direction of the Admiralty, supplying the French Government with transports, with food-stuffs, and military requirements. Was it surprising that, under such circumstances as these, there should have been the great increase of freights which some hon. gentlemen appeared to think was due to the greed of the shipowners?

Extravagant and Wasteful.

The most serious feature of the situation was the extravagant and wasteful use of ships by the Government. There was, he believed, at the present time—certainly it was so up to quite recently—lying at harbour in the Ægean Sea a steamer of over 10,000 tons gross register, the hire of which amounted to £10,500 a month, and that steamer had been lying there for some time simply for the occupation and the accommodation of 40 military and naval officers. She was now known as the "United Services Club." That was one instance of the frightful waste and extravagance going on. Other ships were kept lying idle for months, when they might be making voyages across the Atlantic and bringing home food, and thereby reducing the cost of food in this country. Fast passenger ships had been requisitioned by the Government and sent out to the West Coast of South America for nitrates. One would have been under the impression that those nitrates were

required for military purposes—for explosives. He was given to understand, however, that the material was to supply the farmers with fertilisers. Then, again, hay was brought from Buenos Ayres for the French Government, and the Government were offering 27s. 6d. per ton for hay, while others were offering 85s. for wheat. Therefore, it was not very likely that the Government would get their offer accepted. He would like to emphasise the mischievous feature of the Government handling tonnage like this. The merest tyro in shipping would have combined the nitrates from the West Coast of South America and the hay from Buenos Ayres, utilising the weight and the measurements to reduce the price of both.

Advantages of Neutrals.

Neutrals were benefiting far more than British shipping by the protection of our Navy, and by the advantages which they enjoyed over and above ourselves in the various trades of the world. It was useless for the Prime Minister to come down and talk about economy, economy of the Government, and economy of individuals, when such waste as this existed in Government Departments. He protested most strongly against the shipowner being made the scapegoat of the Government. Members of this House appeared to look upon the shipowner as a greedy harpy who cared about nothing but profit, when, as a matter of fact, in many instances he was not making any profit at all. It did not mean that because some shipowners were making large profits all shipowners were doing so. It would be just as unfair to say that because some workers in the shipyards were making £10 and £12 a week at the present time, who formerly only got £2 a week, that the whole of the working classes were making £10 or £12 a week. He moved the amendment as a protest against anyone being excluded from the purview of this excess profits tax and, having made his protest, he begged leave to withdraw his amendment.

The chairman pointed out that it was an abuse of procedure for an hon. member to take up time in making a long speech in proposing an amendment, which, of course, he assumed to be a serious one, and at the end of his speech not to move it.

Sir A. Markham suggested that they should "take the hat round in the street and in the House for the poor shipowner."

Mr. Houston: I did not say the poor shipowner.

Sir A. Markham said that before the war, in July, 1914, freights on coal to Genoa were 7s. a ton. He presumed the cost would be about 6s. per ton, which would leave about 1s. per ton profit. The rates to-day had increased from 7s. to 45s. a ton. Even supposing that the extra cost to the owner was double, there was a very big margin. If the hon. member said that half the tonnage had been withdrawn, and he was getting six times the freight on the balance of his steamers, he thought he was in a flourishing position.

The Farmer Analogy.

Mr. Holt urged the similarity of the positions of the farmers, whose case for exemption had been urged, and the shipowner. They were told that the farmer ought not to pay this tax because the raw material of his industry, which was chiefly food-stuffs, was costing him more. But the corresponding raw materials of the shipowner—coal, oil and zinc—were also costing more. That was an argument which was as applicable to one business as to the other. They were told not long ago that agriculture ought not to pay as the wages of labour had gone up. That was as true of the shipowners as it was of the farmers. They were told some time ago that farmers ought not to pay because they were so cruelly treated in the matter of certain special expenses. Let them look at the shipowners who had certain special expenses, such as the light dues. Anyone would see that the two businesses were carried on by inherently the same operation and that they ought to be treated in the same way. The object of both businesses was to produce precisely the same result. They got out of the farmer food and drink. The whole business of the shipowner was to produce the same articles. One caused the thing to grow out of the ground, and the other carried it from the place where it was grown out of the ground to the place where it was going to be consumed. There was only one reason for exempting husbandry which did not apply to shipowners. It was that farmers had not kept accounts. Against that they ought to remember that in the case of the shipowners they had been exposed to having their property ruthlessly destroyed by the enemy and their servants killed.

The amendment was negatived.

Mr. Holt then moved an amendment exempting insurance and underwriting.

Mr. McKenna said he hoped that his hon. friend would not press this amendment. On principle he did not think that profits made out of insurance and underwriting ought to be treated differently from profits made out of any other business. But he quite recognised that there were considerations affecting the datum line for insurance companies, and considerations affecting the manner in which one reckoned the profits which ought to be taken into account. A life insurance company, for instance, might show upon ordinary rules an excess profit during the last year, whereas, in fact, owing to the depreciation of its capital, there would be in truth a very real loss. He meant to deal with that difficulty at an appropriate time. With regard to marine insurance, they thought that there might be some special provision dealing with that trade, but not excluding it. There were circumstances which required special treatment.

After some further discussion the amendment was then withdrawn.

Concession to Underwriters.

On Tuesday night the Chancellor of the Exchequer had an amendment inserted in the Finance Bill so as to give a special reference to the Board of Referees on the question of increasing the percentage of pre-war profits as the datum line in regard to such businesses as marine insurance.

SHIPPING IN THE FOREIGN TRADE.

Government Regulation Introduced.

A most important step is being taken by the British Government to regulate the carrying trade carried on by British shipping between one foreign port and another. The announcement was made by the President of the Board of Trade on Tuesday in the House of Commons, and effect was duly given at a meeting of the Privy Council yesterday (Wednesday).

Mr. Runciman said: The whole question of shipping freights has been carefully considered and Orders in Council will be made to-morrow (Wednesday) prohibiting British ships from carrying cargo from one foreign port to another foreign port except under licence, and authorising the Government to requisition ships in case of emergency for the carriage of food-stuffs, &c. I understand from the Admiralty that there is power to requisition ships abroad and ships have, in fact, been requistioned abroad.

THE U-BOAT WAR.

Ever since the beginning of that campaign which led to such a "formidable" number of U-boats being converted into permanent submarines, the Hamburg shipping journal *Hansa* has devoted the major portion of its section "On the Outlook" to the submarine war. We have now arrived at about Chapter XXXV of the recital, and it has been a sad week indeed when the indefatigable person responsible for these notes has not managed to churn out four columns packed full of optimistic hate and facts —and other things. We seem to have heard something ourselves about submarine failure a few weeks ago, but this it seems is quite absurd. *Hansa* says so—and still continues to print four columns weekly on the subject. There is a nice little summary included every time to show what vessels have been attacked by the submarine heroes (who themselves form the subject-matter of from one to three columns, according to the state of the news and rumour market). When the list of victims looks a trifle anæmic, an analysis of previous summaries is given and a few cases where the name of the vessel "could not be observed" are included. Vessels sunk by mines are, of course, taken into account as well as those whose cause of sinking was "doubtful"! By these and many other arts a good bill is served weekly. The case of a 47-ton vessel recently quoted as destroyed by a torpedo, strikes one as a particularly good bargain. In earlier days the Declaration of London formed a rare topic for discussion, but for some time past it seems to have been usurped by President Wilson, the "freedom of the seas," the 12-milliard mark war loan, the state of British nerves, political personalities and other entertaining topics. The writer takes the broadest view of the scope of his subject, and generally keeps well out towards the boundary fence. "Shortage of tonnage" is a very favourite topic, which is turned over and over and looked at in every direction except that of percentage actually destroyed. The distinction between shortage caused by loss and shortage due to abnormal demand is not dwelt upon. How comforting it must be for the enemy to reflect—and declaim—that whilst British shipping is suffering such losses, German ships are snug in port and waiting to be taken over again by their owners and used on the *überalles* system to the utter discomfiture of the English.

FROM OUR CORRESPONDENTS.

CLYDE AND DISTRICT.

(From Our Own Correspondent.)

Glasgow.

[illegible] committee thought the outbreaks might be due to smokers throwing away cigarette ends, but of that there was no evidence. Sir Thomas [illegible] said he thought there was a certain amount of laxity of administration [illegible] There was loose material lying about some of the sheds which he thought required less than a cigarette end to set it on fire. They would not get any insurance company to take them up [illegible] if their character would be so bad.

The report of the committee of the Clyde Trust, which was appointed to consider the question of equipping the harbour with fire-extinguishing appliances, has now been issued. The committee estimate that the initial cost of a fire-float would be at least £10,000, while the annual cost of maintenance is put at not less than £3,500, this sum being required to keep the apparatus in constant readiness in case of fire at any part of the harbour. Legal opinion was taken on the question of whether it was the duty of the Trustees to provide fire floats for the dock, and that opinion was to the effect that as the Trustees paid to the Corporation of Glasgow a sum of £31,988 in respect of municipal taxes, including an assessment for fire-extinguishing appliances, the responsibility for dealing with fires at the harbour rested with the Corporation. The legal opinion was further to the effect that the Trustees had no statutory power or duty to incur expenditure in establishing or maintaining a fire-float either alone or jointly with the Corporation.

Clyde Labour Questions.

It is announced that the Clyde District Committee of the Federation of Engineering and Shipbuilding Trades have lodged an application with the North-West Engineering Trades Employers' Federation on behalf of the affiliated organisations for an advance of 2d. per hour on existing time rates with an equivalent increase on piece rates. The District Committee have also added the request that the proposed increased rates should come into force at the beginning of December. Several kindred trade unions, such as the Ironfounders' Federation, have made a similar demand on behalf of their members.

Following on the release of the three imprisoned shipwrights from Fairfield Shipyard, the Government inquiry into the alleged grievances of munition workers on the Clyde was resumed last week by Lord Balfour of Burleigh and Mr. Lynden Macassey, K.C. The proceedings were strictly private, but it is understood that evidence was heard last week regarding complaints made by shipyard workers. It is probable that no decisions will be given in individual cases until the inquiry into the whole condition of affairs connected with shipyard and munitions works in the district has been completed.

The Grain Trade of Glasgow.

The grain trade at Glasgow Harbour has increased to a remarkable extent since the war began. This is borne out by the report of the traffic superintendent of the harbour for the quarter ended September 30. During that period 10 vessels discharged at Meadowside Granary 41,445 tons of grain, and at other parts of the harbour 28 vessels, mostly liners with general cargo, discharged 53,615 tons of grain. Of the 41,445 tons delivered at the granary, 36,441 tons were in bulk, and 5,004 tons in bags. There were 33,551 tons of maize, 3,637 tons of wheat and oats, and 2,473 tons of linseed. The greater part of the grain shipments brought in by the liners consisted of wheat.

Lighting the Graving Docks.

Some interesting trials have been carried out at Glasgow harbour in connection with the lighting of the graving docks. The tests, which were carried out by the engineer of the Clyde Navigation Trust, in conjunction with the mechanical engineer, were designed to show whether electricity, compressed gas, or low-pressure gas was the most suitable illuminant for the docks. The engineer recommended the continuance of low-pressure gas in view of the greater cost of the other systems and the Trustees have adopted this recommendation.

MERSEY SHIPPING AND SHIPBUILDING.

(From Our Own Correspondent.)

Liverpool.

In your issue of October 21 I briefly noted that important new bye-laws were being considered by the Mersey Docks and Harbour Board dealing with the discharge of grain overside in bulk from steamers lying in dock. It has now been definitely decided, after consulting the shipowners' associations, to give to consignees of grain in bulk the right in certain cases of demanding overside delivery from vessels. This right, however, will be dependent upon such consignments being not less than 75 per cent. of the whole cargo in such vessel, or in any one hold; on sufficient craft being alongside to receive such overside deliveries, without delaying the vessel; and in case of dispute, the harbour-master to decide whether the operation is practicable.

Navigation of the Mersey.

Another important decision of the Mersey Docks and Harbour Board creates new rules concerning the lights and signals to be carried, and measures for avoiding collisions between vessels navigating the River Mersey and the sea channels. These are the outcome of negotiations with the Liverpool Steamship Owners' Association, the Liverpool Shipowners' Association, and the Liverpool Lighter and Barge Owners' Association, and in the notice to mariners which is being published therewith, attention is called to the fact that there is only one main channel into and out of the port.

There continues to be a decrease in the number and tonnage of ships reported inwards and cleared outwards at the Mersey port. For the ten months of the present year, when compared with the same period of 1914, there is a total decrease of 215 ships and 1,179,194 tons reported inwards, while cleared outwards the ships have increased by five, but the tonnage has decreased by 1,078,817 tons. The difficulty of dealing with existing traffic is therefore clearly one of transport and deficient supply of labour.

Transport Crews.

News was received in Liverpool on Monday this week that as a result of the conference in London last week regarding the exclusion of Chinese sailors and firemen from Admiralty transports, the Admiralty have decided to notify owners of all such vessels and the mercantile marine offices that transport crews should, so far as possible, be either British or British coloured. No other nationalities should be engaged unless it is found impossible, without delay to the transport service, to secure crews of British and British coloured persons.

Atlantic Passenger Traffic.

Statistics regarding the great decline in Atlantic passenger travel show that from January to September this year the third-class passengers who left Liverpool for the United States and Canada numbered only about 20,000. About the same number sailed in the second cabin, and 6,000 in the saloon. For the corresponding period of last year there left over 100,000 third-class passengers, 60,000 second cabin, and close upon 30,000 saloon.

Several of Liverpool's younger and more energetic shipowners are just now helping the Government either directly or in an advisory capacity. Sir E. Lionel Fletcher is assisting in the Transport Department, Mr. T. Royden at the Admiralty, Mr. R. D. Holt, M.P., and Mr. Russell Rea, M.P., are on the Advisory Committee to the Admiralty; and the Minister of Munitions is having the aid of Mr. J. B. Chadwick. There are besides, others who are serving on various committees dealing with transport and congestion problems.

BELFAST SHIPBUILDING AND SHIPPING.

(From Our Own Correspondent.)

Belfast.

The position at Belfast is unchanged. Employment could be found for a great deal more skilled labour than is available. It is simply impossible to get men, and various schemes are on foot for increasing the output of munitions, including the employment of women (in an establishment by themselves) and the training of unskilled men to do specified work. Notwithstanding anything that may be said to the contrary, there is no doubt that trade union restrictions are standing in the way in some directions. There is no diminution in the amount of work in the port, and with the Government constantly requisitioning new tonnage for various purposes, employment is very plentiful. A new steamer for

American owners was requisitioned last week. The Italian Government has sent a large tramp steamer to the port to be insulated by J. & T. Hall. There is no likelihood of any merchant tonnage being launched in the immediate future, so great is the pressure in other directions.

Port Facilities.

It is seldom, if ever, that traffic is diverted from the port of Belfast by reason of alleged inability to handle cargo, but that Dublin should be selected on that account is unprecedented, because Belfast shipowners have repeatedly complained that Dublin is not up to date in the matter of accommodating their large liners. In the present instance the Royal Commission on Sugar Supply a few days ago conveyed 5,000 bags and 1,000 cases of sugar to Belfast via Dublin, and on complaint being made of the extra cost which this entailed, the official reason was that Dublin was the only port which could handle the goods. The allegation was that there was not storage facility in Belfast, but those responsible have been disabused of this idea, and the next consignment, which will be very much greater will come to the port without having to be railed from Dublin.

Traffic Returns.

Strikes and other causes continue to cause a certain amount of irregularity in some of the cross-channel services. The Fleetwood and Heysham have been running well since the resuming after the strikes in those ports, but the Dublin boat has now been taken off owing to labour trouble on the Liffy. Owing to congestion at Bristol there was no sailing to that port from Belfast on November 5. The tonnage of vessels entered the port from January 1 to October 30 amounts to 2,538,682 tons, which is 228,313 below that of the corresponding period of last year.

SOUTH WALES NOTES.

(From Our Own Correspondent.)

Cardiff.

In connection with Lord Derby's recruiting scheme the Central Tribunal for the whole of East Glamorgan, which includes the City of Cardiff and district, has just been appointed, under the Chairmanship of Sir Richard Mathias, for the purpose of considering appeals by enlisted men who desire to be placed in back groups. Among the dry-dock employers dissatisfaction has been expressed at their not having a representative on the committee, inasmuch as the work of the dry-docks, ever since the outbreak of war, has been materially disorganised by the difficulty experienced in obtaining sufficient labour to cope with requirements.

Swansea Harbour Trust.

The Swansea Harbour Trust statement of revenue and expenditure for September last shows a revenue of £26,082, compared with £21,906 in the same month of 1914. The expenditure was £28,803 against £27,201, which represents a loss of £2,720 against £5,295. The revenue for the first 9 months of the present year was £224,356 against £238,876, and the expenditure £256,822 against £267,673 in 1914. The loss for 1915 was £32,465 as compared with £28,797 in 1914. The representatives of the Swansea Harbour Trust and the Swansea Corporation Committee are still negotiating the request of the Trust for an advance by which the Town guaranteed to assist the Trust financially in certain events. The Committee have already agreed to advance the whole of the £150,000 in two instalments of £75,000 each.

Ship Repairing.

Brisk conditions continue in evidence in the ship-repairing industry of South Wales. A large number of boats are being dealt with, and while most of the jobs consist of general work, there are also several heavy jobs in hand. The Bute Shipbuilding & Engineering Company are repairing bottom damage to the Radcliffe steamer *Gileston*, while the Cardiff Channel Dry Docks & Pontoon Company, Ltd., are continuing with heavy bottom, stern and internal repairs to the steamer *Neebing* owned by the Canadian North West Steamship Company, Ltd. T. Diamond & Co. are still busily engaged in extensive stem damage repairs to the steamer *Cardiff Hall* owned by Edward Nicholl & Co., and also a heavy general survey to the Bolton Steamship Company's steamer *Reynolds*. Elliot & Jeffery are well employed in surveying the Greek steamer *Grigorios Anghelatos* and machinery repairs to the South Wales Shipping Company's steamer *Polmanter*. The Mountstuart Dry Docks, Ltd., are working at full pressure on extensive bow damage repairs to a steamer, owned by W. E. Hinde & Co., Cardiff, and general repairs to the Argentine Cargo Line, Ltd.'s, steamer *La Blanca* and the French steamer *Aster*. The Barry Graving Dock & Engineering Company have just completed very heavy deck and shell repairs to the French steamer *La Fontaine* and are now busy with general repairs to the steamers *Kalibia*, *Tresillian*, *Trevaylor*, *Stefania*, *Zeta*, *Llandrindod*, *Boukadra* and *Kilkerran*. John Shearman & Co., Ltd., are working on 29 steamers, and at Newport, Mordey, Carney & Co., Ltd., are completing an overhaul, which has taken about two months, on the steamer *Amora*, owned by the Armourer Steamship Company, besides general repairs to the steamers *Participation*, *Schaldis*, *Ribera* and *Nicolaos Athanasoulis*. At Swansea and Port Talbot work is generally brisk on a comparatively large number of steamers, but the jobs usually consist of general and over-hauling repairs.

AUSTRALIAN NOTES.

(From Our Own Correspondent.)

Melbourne.

Such expressions as "daylight robbery" and "blackmail" have been used by representatives of the agricultural interest in the Commonwealth Parliament in the course of fierce denunciations of the arrangement under which the Federal and Provincial Governments of Australia—now all Labour Governments, with one exception—intend to control the chartering of wheat ships and to make a large profit out of their share in this latest form of interference with commerce.

The position is certainly a novel one, and it will be interesting to see how it works out within the next three or four months, when tonnage will be urgently required for the handling of wheat available for export. According to official calculations, this year's yield will exceed by 50,000,000 or 60,000,000 bushels the largest crop yet harvested in Australia, and it is believed that the exportable surplus will not be less than 75,000,000 bushels. Government interposition, when first proposed, was justified mainly on the plea that in view of the scarcity of ships caused by the war it would be necessary to secure an equitable distribution of the available tonnage between the several wheat-exporting States of Australia. No objection was raised to this by the producers, but they now regard with varying degrees of doubt and angry hostility the financial part of the scheme, upon which they were not consulted. The Federal Government, as recently reported, are employing two well-known firms—Gibbs, Bright & Co., and Elder, Smith & Co.—to secure the freight. In the following letter, which has been read in the House of Representatives, these firms set out the terms upon which they have agreed to do the work :—

"Our remuneration for chartering to be 4d. per ton on all tonnage chartered by us—in lieu of chartering commission.

"The total chartering commission of 5 per cent. to be returned to the Commonwealth Government, less any chartering brokerages that may be paid away by us to local brokers or brokers in the United Kingdom or elsewhere—where such chartering brokerages be earned by Elder, Smith & Co., Ltd., London, or Antony Gibbs & Sons, London—they are to be at the rate of $\frac{5}{8}$d. per cent. not exceeding 4d. per ton.

"On Commonwealth and interned vessels no chartering commission be paid, whether on parcel or full cargoes.

"The fees paid us to be subject to revision after 500,000 tons have been chartered by us, but in any case not later than December 15, 1915.

"Where under this arrangement no provision is made for work actually done by us a fair and reasonable rate of remuneration to be paid."

When this letter came under Parliamentary discussion the Federal Attorney-General, Mr. W. M. Hughes, was asked what he proposed to do with the 5 per cent. discount to charterers which would be returned to the Government. He replied: "What do we propose to do? Stick to it, of course!" He went on to say that the amount ordinarily charged in the chartering of ships was 5 per cent. After payment of the allowance arranged for with the two agent firms, $3\frac{3}{4}$ per cent. would remain in the hands of the Government, and this would go to the Commonwealth and the States as "the trustees and guardians of the people." In other words, the money is to be passed into the public revenue. In a latter discussion on the matter, Mr. Hughes alleged that the whole of the $3\frac{3}{4}$ per cent. represented cash which, in ordinary years, would "go into the pockets of the charterers and come out of the pockets of the farmers." Parliamentary representatives of the rural interests gave a vigorous denial to his statement. They stated that the whole of the arrangement for the State control of charters was extremely unsatisfactory—that it upset connections which had worked well hitherto in the interests of the farmers, that it would impede trade, and put a "tax" on the whole of the wheat exported.

THE FREIGHT MARKETS

From Our Own Correspondents.

London.

[illegible] characterises the various sections of the freight market. The Plate is steady, and so too are rates to go from the Mediterranean. A fair demand is reported in regard to the United States. From the Northern Range the *Anglo Mexicana*, 26,000 quarters, 10 per cent., has been taken up at 16s. West Italy, 6d. extra if two ports discharge, heavy grain. To Marseilles from the Northern Range [illegible] has been accepted by the [illegible], while to the Piraeus a Greek steamer, 20,000 quarters, 10 per cent. has been closed at 15s. 3d. Oats to London have paid 10s. 3d. to the *Yarrowdale* and *Antinoe*, with option at the same rate of Avonmouth. Baltimore to Sweden has paid 14s. 9d. to the [illegible], a 22,000 quarter, 10 per cent. boat. In the Eastern section firmness prevails, and 70s. on deadweight has been paid for tonnage from Bombay to the United Kingdom. From the Plate the *Michaelangelo*, 3,300 tons, 10 per cent., has been conceded 83s. to Spanish Mediterranean ports. In West Coast business 85s. has been paid from the nitrate ports to Vladivostock. To Marseilles, from Antofagasta, two vessels have been closed at 90s. Barley from North Africa will pay 32s. 6d. to Leith, and from Sfax to French Bay ports for phosphate 35 fr. is to be had. A steady tone characterises time chartering. In the outward coal market from the Tyne there is little disposition for rates to fall. There is still a scarcity of tonnage, and though there has not been a repetition of the highest rates to Mediterranean ports, the tendency in the nearer trades is for enhanced figures. Genoa is worth 48s. and Port Said 49s. Rouen stands at 21s. to 22s., and Bordeaux 20s. 3d. Recent fixtures include:—River Plate, 36s.; Rouen, 21s. 6d.; and Genoa, 48s. Cardiff reports a strong but not very active freight market. Tonnage supplies have not equalled charterers' requirements. Recent fixtures are—Lisbon, 25s.; Havre, 16s. 3d.; and St. Nazaire, 28 fr. Hull to Genoa or Savona has paid 48s. 6d. for a 4,300-tonner, whilst Glasgow to Rouen, for a 2,000-ton vessel, has been done at 21s. Swansea to Rouen has been closed for the *Heidrun* at 18s.

Glasgow.

There has been a further advance in rates on the Glasgow market during the past week, due almost entirely to the shortage of tonnage. Outward coal rates, especially to the Mediterranean, reached the highest level yet recorded. Towards the end of last week a fixture was reported on the local market at 45s. 6d. from Glasgow to Genoa, and two at 21s. from Glasgow to Rouen. Outward rates from Wales were also very strong. The following are among the fixtures reported:—Glasgow to Bordeaux, 2,300 tons, about 33 fr.; Glasgow to River Plate, 2,500 tons, 37s. 6d., November 8; Glasgow to Genoa, Savona, Leghorn, or Bagnoli, 4,400 tons, 45s. 6d., guaranteed terms; Glasgow to Rouen, 2,800 tons, 21s. America and the River Plate have been strong in grain freights, while Australia has also been in the market for tonnage for the new season's crops. There was great activity in grain chartering from the States, following on the alteration made by the Government in regard to the non-acquisition of tonnage to load wheat. The rates from New York, Philadelphia, and other ports were generally speaking, from 12s. 6d. to 13s. 3d. to the Bristol Channel, 13s. 6d. to the East Coast of the United Kingdom, and 15s. to West Italy. The River Plate was firm at 80s. for new season, but 82s. 6d. was said to be charterers' indication for November and December, and 77s. 6d. was accepted by one owner for January-February. In the East, Bombay secured a couple of steamers at 70s., to Hull and Liverpool respectively. A fixture at 92s. 6d. from Calcutta was reported, and Australia accepted further tonnage at 95s. home. The North Pacific rate was round about 125s. to the United Kingdom.

Newcastle-on-Tyne.

There has not been a great deal of activity on the local freight market during the past week, owing to the great scarcity of steamers, but the demand for tonnage is brisk and rates for all destinations are appreciably improved. The more sparing issue of licences for the shipment of coal cargoes has had little effect on the tendency of rates, and the supply of boats is quite inadequate to meet the heavy demand. Coastwise, business is quiet, but rates have advanced to the level of 12s. to London, an increase of 2s. on the week. A considerable amount of tonnage continues to be taken up for North France by coke shippers, and up to 28s. has been paid for Dunkirk or Calais. For coal, Rouen is fully maintained at 21s., and Caen or Calais is 6d. advanced. The Bay is strong on the basis of 28s. to Bordeaux. Though towards the end of the period under review slight weakness has been apparent in Mediterranean rates, advances of up to 4s. 6d. are to be recorded for Genoa, whilst Porto Ferrajo is 3s. dearer and Barcelona 2s. up. Port Said has paid the hitherto unheard-of rate of 51s. A fixture to Trondjhem is interesting as showing the relative value of North Sea voyages. Fixtures arranged since last report include the following:—Bordeaux, 1,800, 28s.; Barcelona, 1,900, 35s. 6d.; Boulogne, 450, 28s.; coke; Bagnoli, 3,000, 46s.; Caen, 800, 28s.; coke; 1,800, 20s.; Calais, 1,700, 20s. 6d.; Civita Vecchia, 5,000, 49s.; Dunkirk, 500, 28s., coke; 600, 25s., coke; 1,000, 21s.; Fecamp, 1,200, 20s.; Genoa, 1,000 tons coal, 48s.; 1,500 tons coke, 67s. 6d.; 4,800, 49s.; 4,000, 48s.; Gibraltar, 3,000, 29s.; Havre, 600, 27s. 6d., coke; 1,500, 20s.; Leghorn, 2,000, 49s. 6d.; London, 1,600, 10s. 6d.; 1,800, 12s.; Marseilles, 5,000, 41s. 6d.; Naples, 3,000, 46s.; Port Said, 5,500, 51s.; 4,400, 49s. 6d.; Porto Vecchio, 3,000, 48s. 6d., 1,000; Porto Ferrajo, 3,000, 46s.; Rouen, 1,900, 21s.; River Plate, 4,000, 37s. 6d.; St. Vincent, 1,400, 32s. 6d.; Savona, 2,500, 48s.; 4,500, 48s., guaranteed discharge; Trondjhem, 1,200, 17s. 6d.; Treport, 1,500, 21s.; 800, 21s. 6d.

Liverpool.

The two most noteworthy features of this market are all round firmer rates, and a continued scarcity of tonnage. These conditions obviously limit transactions, and notably so outward engagements. Rates are appreciating particularly to Mediterranean destinations, and also to some Eastern positions, but to South America values are more dependent upon Plate prospects homewards, and are therefore more variable. Time-charter tonnage is still needed, and six months in general trades is now getting 20s. Time rates for Japanese vessels have also improved 2s. 6d. to 15s. 6d. for 12 months, with war risk paid by charterers. Homeward freights are generally firmer, though some markets are quiet. Easterns, which have been advancing, have the following representative values:—Bombay to United Kingdom, 70s.; Calcutta, 87s. 6d. to 90s.; Karachi has further improved to 61s. 6d.; Saigon 90s. on dead weight to France; and 100s. for meal to Liverpool; while Vladivostock offers 87s. 6d. to United Kingdom for January; and North Pacific, 125s. to 130s., via Straits of Magellan. Mediterranean homewards is a steady market with a moderate inquiry for tonnage. Ore ports have several fixtures on 15s. basis to States, while Bilbao paid 14s. 6d. to Newport, 17s. to Garston, and is offering 19s. to Heysham. North America is less active for grain, but otherwise steady. Northern Range still indicates 13s. 3d. Bristol Channel, 14s. 6d. to 15s. to Marseilles, and 15s. 6d. to 16s. to West Italy. Cotton rates are advancing to attract much needed tonnage. The River Plate is for the time being an improving market, with 85s. as the present basis from San Lorenzo to United Kingdom. Australia holds to 95s. to United Kingdom, and nitrate ports are firm on basis of 90s. to United Kingdom. Sail freights outward are dull, but there is some inquiry from Chili for grain ships on 65s. basis to United Kingdom, February-March.

Cardiff and Swansea.

Since our last report the freight market has further stiffened, and several fresh high records have been created. The predominant features of the market are the continued scarcity of tonnage and steadily advancing rates. Inquiries also have circulated on a good scale for most directions, and the anxiety of merchants to cover their requirements are testified by the high rates paid. Altogether vessels to carry 183,300 tons were fixed to load at Cardiff last week, or 9,680 tons more than in the preceding week. An urgent and good demand was apparent for the Mediterranean, and a fair amount of business was concluded, Algiers paying 47 fr. (five); Alexandria, 47s. 6d. and 48s. (twice—a new high record, all 500 tons delivery); Barcelona, 37s. 6d.; Bilbao, 20s.; Genoa, with options, 46s., 45s. (three) and 47s. (twice—a new high record); Lisbon, 25s. (a new high record—twice, 350 and 400 tons delivery respectively); Marseilles, 55 fr. (three) and 56 fr. (a new high record); Malta, 42s. 6d. (twice); Oporto, 24s. 6d.; and Tarragona, 34s. Bay and Coast chartering was limited by meagre tonnage offers, while rates maintained a very firm tone, Bordeaux fixing at 30 fr. (twice); Brest, 13s. 6d. (twice) and 14s.; Havre, 15s. 9d. and 16s. 3d. (a new high record); Rouen, 17s. 9d. (three), 17s. 6d. and 18s.; and St. Malo, 28 fr. South American business was fairly active with rates, displaying an improving tone. Bahia Blanca was done at 40s.; River Plate, 37s. 6d. (twice); Rosario, 38s. 3d.; and Villa Constitucion or Campana, 39s. 6d.; while the Canary Islands was represented by Cape de Verdes at 32s. 6d. and 30s.; and St. Vincent at 32s. 6d., rates which were below the top figures touched so far this year. For the East the inquiry was a usual slow chartering being confined to Aden at 52s. 6d. free brokerage (a new high record).

Chartering from Swansea and Port Talbot amounted to only 29,570 tons, or 6,970 tons less than in the previous week. Rates, however, were easily upheld, tonnage being below requirements. Genoa was done at 47s. 6d. (a new high record); Marseilles, 56 fr. (a new high record); Bordeaux, 31 fr.; Havre, 16s. 3d. (twice) and 16s. 6d. (twice—a new high record); Nantes, 28½ fr.; and Rouen, 17s. 9d. (twice), 17s. 6d. (three) and 18s. (four).

Hull.

The market has a very firm tone, and actual business done in the Mediterranean direction was 48s. 6d. paid for Genoa or Savona for loading at Hull or Immingham, whilst other rates are 47s. 6d. for Alexandria from Hull. In the River Plate direction the tone is firm, with 37s. 6d. to 40s., according to size, quoting for Buenos Ayres from Hull. In the coasting trade 21s. rules for Rouen from Hull, 20s. for Dieppe from Hull, 20s. for Honfleur from Hull, 20s. for Havre from Hull, and 10s. 6d. for London from Hull. To the Bay 26s. rules for Bordeaux and St. Nazaire from Hull. Licences for French ports are given without delay, but very little chartering is doing to Scandinavia, though 15s. was paid in one instance this week for Gothenburg from Hull.

COMPANY MEETINGS.

Liverpool & North Wales Steamship Company, Ltd.—Presiding at the annual meeting held in Liverpool last week Mr. Henry MacIver, Chairman, said that when they heard on all sides of the large profits being made by shipowners since the war began, and found companies declaring dividends which in times of peace they were totally unable to earn in their legitimate business, he feared the balance-sheet of the company might be disappointing to some of the shareholders who anticipated great results from the profits earned by the Government employment of their vessels. It should, of course, be evident to all that these increased dividends were paid out of money provided by the National Exchequer, and the shareholders' gain was the country's loss. He did not think any company or person had any right to exploit the country's needs for individual benefit or for the benefit of shareholders. On the other hand, when vessels were requisitioned by the Government, and in consequence of their requisition, the business in which they were formerly employed could not be carried on, the owners or managers had a right to expect such a rate of remuneration would be paid as would not unduly prejudice those who had provided the capital invested. When the steamers of the company were taken over for Government employment, the rate of hire tendered was wholly inadequate, even to meet outgoing expenses, and would have left nothing out of which dividend could be paid. A satisfactory arrangement had, however since been arived at. On behalf of the company he objected to a rate of remuneration which would leave them in a much worse position than if their steamers had not been requisitioned. The view he held was that the company should not be prejudiced by the transfer of its steamers to Government employment, but that the rate of hire paid for these steamers should be sufficient to provide the usual depreciation and interest and a dividend equal to that which the company conducting its legitimate business would have declared.

The report was adopted.

COMPANY REPORTS.

P. & A. Campbell, Ltd.—Interim dividend of 5 per cent., free of income-tax, on the ordinary shares.

Griffiths Lewis Steam Navigation Company, Ltd.—A final dividend of £4 per £50 share, free of income-tax, making 20 per cent. for the year.

Glencliffe Steamship Company, Ltd.—The 15th voyage of the *Glencliffe* left a profit of £9,125. An interim dividend has been declared of £1 per share, free of income-tax.

Fairfield Shipbuilding & Engineering Company, Ltd.—Dividend on the ordinary shares of 7½ per cent., tax free, £15,000 to general reserve, £1,000 to income-tax, and £24,746 carried forward.

Thomas Smailes & Sons' Steamship Company, Ltd.—Profits for the year are £39,116. £8,236 is allocated for depreciation, £4,000 to insurance, £3,000 to re-classification and upkeep, and £5,000 to income-tax fund. A final dividend of 25s. per share is made, being at the rate of 20 per cent. for the year. £5,673 is carried forward.

Wm. Cory & Son, Ltd.—Interim dividend on the ordinary and employees shares of 4 per cent., less tax, on account of the year ending March 31, 1916.

The Leonora Steamship Company, Rotterdam.—This company is distributing 50 per cent. dividend for the year ending June 30 last. This affords a striking example of the profits which some neutral owners are reaping from the war.

John I. Thornycroft & Co., Ltd.—The accounts are being made up to July 12, 1915, from which date the company became a controlled establishment under the Act. A general meeting will be called about the end of the current month to approve the accounts and declare the dividends in connection therewith.

Mersey Docks and Harbour Board.—The financial statement for the year ended July 1 last states that after paying all charges, including £930,820 for interest, out of a total revenue of £2,150,735, and carrying £100,000 to sinking fund account, there is a balance of £114,993, which has been transferred to unappropriated receipts account. This account now amounts to £539,116.

Nüske & Co., Schiffswerft, Maschinenbau, A.G.—This company declares 4 per cent. (5 per cent.) dividend for 1914-15. Including £360 (£294) brought forward and allowing £2,400 (£2,000) depreciation, there is a net profit of £3,450 (£6,700) from a working surplus of £37,200 (£44,700). The balance-sheet shows mortgage bonds £20,200 (£21,500) and current liabilities, including payments on work in hand £77,500 (£68,500). Bills, bonds and cash are shown at £4,150 (£4,370); arrears £24,100 (£30,500); balance and materials £12,500 (£11,000); products £51,000 (£40,000).

See- u. Kanalschiffahrt W. Hemsoth (Dortmund).—This company obtained a gross working profit of £12,500 (£24,600) for the past financial year, but on allowing for capital charges, depreciation, &c., the net result is a loss of £3,190 (the 1913-14 profit of £2,100 was absorbed chiefly in covering 1912 losses). In this statement no account is taken of the £25,800 loss represented by the loss of the steamers *Wilhelm* and *Hans Hemsoth*. The future of the company depends chiefly on the extent to which this loss is made good by the State. Business was paralysed till the end of 1914, but inland shipping has since developed favourably.

Sharpness New Docks and Gloucester and Birmingham Navigation Company.—The report for the half-year ended September 25, 1915, states that the tonnage receipts show an increase of £1,333 16s. 10d., as compared with the corresponding period of last year. Grain imports for the half-year show a decrease of 4,135 tons; timber imports an increase of 16,385 tons; and sundries a decrease of 8,873 tons. Grain imports for the year show a decrease of 33,678 tons; timber imports an increase of 10,743 tons; and sundries a decrease of 20,624 tons. The directors recommend the payment of the full year's dividend on preference stock "A."

Barry Graving Dock and Engineering Company, Ltd.—Dividend at the rate of 10 per cent., less income-tax, and a bonus of 2s. per share on the ordinary shares for the past half-year, making 11 per cent. for the year. Profits and dividends during the past four years were as follows:—

Year.	Profit. £	Dividend. Per cent.
1912	19,071	9
1913	25,295	10½
1914	19,550	10
1915	29,961	*11

* Includes bonus of 2s. per share.

Holland-Gulf Steamship Company.—The report for 1914 states that the company has lost two steamers, the *Hermina*, which stranded in April, and the *Maria*, which was sunk by a German cruiser. The company contracted with the Wilton's Company for two steamers of 1,850 tons each, of the *Alwina* type. In addition to this orders have been placed for steamers of 1,000 tons, 3,200 tons and 700 tons respectively. The profits for the year amounted to 103,540·93 fl., against 173,611·71 fl. for 1913. The depreciation account has been increased. The boiler and repairs fund remains at 45,000 fl. After payment of expenses, &c., 102,330·38 fl. is left for distribution. The directors recommend a dividend of 8½ per cent., leaving 867·85 fl. to be carried forward.

Reiherstieg Company.—Under existing conditions fragmentary particulars are available concerning the working of this company. The concern is apparently taking full advantage of the war-secrecy principle. After deducting working expenses, including repairs to structures, tools, floating docks, &c., there is shown £12,350 (£32,500) net profit, including balance from previous year. The gross profit, according to the profit and loss account, is £90,000 (£119,200). The balance-sheet shows, Assets: Structures, floating docks, machinery, tools, miscellaneous equipment £499,000 (£449,500); material

[illegible] £47,250 £41,400. Debtors in respect of ships, machines [illegible] £166,000 £221,000. [illegible] Share capital [illegible] £215,000. [illegible] £252,000 £302,000.

COMPANY REGISTRATIONS.

Lincolnshire Steamship Company, Ltd.—Capital, £1,000, £1 shares. Objects, to carry on the business of ship owners, tug and boat owners, shipbrokers and forwarding and transport agents, &c. W. Darlington is the first manager. Registered office, 41, Castle Street, City, Liverpool. Private company.

"Westerham" Steamship Company, Ltd.—Capital, £[illegible], in £1 shares. Objects, to take over from John Harrison, Ltd., and own and work the ss. *Westerham*, of Hull, and to carry on the business of shipowners in all its branches. First directors, H. Harrison (chairman) and E. T. Lindley (both permanent). Qualification, [illegible]. Registered office, 19-51, East Cheap, E.C. Private company.

Cornforth Steamship & Trading Company, Ltd.—Capital, £7,000, in £1 shares, £1000 [illegible] per cent. cumulative preferred). Objects, to carry on the business of owners, and charterers of ships, barges, lighters, tugs and craft of all kinds; shipbuilders and repairers, proprietors of docks, &c. First directors, I. W. Cornforth (senior director) and N. W. Munro (both permanent). Qualification, five ordinary shares. Registered office, 3, Creechurch Lane, E.C. Private company.

Entente Steamship Company, Ltd.—Capital, £100,000 in £1 shares. Objects, to carry on the business of shipowners, shippers, ship, insurance, loading, passenger and general brokers, managers of shipping property, &c. Leopold Walford (London), Ltd., are the first managers. Registered office, 29, Great St. Helens, E.C. Private company.

Hill, Southampton, Ltd.—Capital, £45,000 in £1 shares (15,000 cumulative preference). Objects, to take over the business of coal factors, shippers, merchants, &c., carried on by A. J. L. Hill and D. H. Willey as the "Southampton Steamship and Coal Company," at Southampton and elsewhere. First directors, D. H. Willey and A. J. L. Hill (both permanent). D. H. Willey is managing director. Qualification, 500 shares. Registered office, 1, Chapel Row, Bath. Private company.

Red Funnel Shipping Company, Ltd.—Capital, £60,000 in £5 shares. Objects, to take over the ss. *Grantula*, and to carry on the business of shipowners, shipping property, ship or engine builders and repairers, &c. First directors, J. D. Piaz and R. Japhet and P. le Brun and J. Fitzgerald (London agent and London sub-agent, Compagnie Generale Transatlantique of Paris respectively). Registered office, 8, Lloyd's Avenue, E.C. Private company.

Plisson and Lysberg Insurance, Ltd.—Capital, £20,000 in £1 shares. Objects, to carry on the business of insurance brokers and agents, insurance of steamships, vessels, boats and craft of all kinds, &c. Registered office, Cambrian Buildings, Cardiff. Private company.

Williams Steam Navigation Company, Ltd.—Capital, £15,000 in £1 shares. Objects, to carry on the business of ship and tug owners, ship and loading brokers, shipping and forwarding agents, &c., and to adopt an agreement with W. J. Williams, J. Rodgman, E. Owen, and E. L. Williams, trading as "Williams & Rodgman." First directors, W. J. Williams, J Rodgman, E. Owen and E. L. Williams. E. R. Payne is first secretary, with £150 per annum. Registered office, 19, James Street, Cardiff. Private company

Equinox Steamship Company, Ltd.—Capital, £100,000, in £1 shares. Objects, to carry on the business of shipowners, shippers, ship, loading, insurance, passenger and general brokers, managers of shipping and other property. Minimum cash subscription, seven shares. Leopold Walford (London), Ltd., are the managers. Registered office, 29, Great St. Helens, E.C.

W. Lamplough & Co., Ltd.—Capital, £100,000, in £1 shares. (10,000 preference). Objects, to carry on the business of shipowners, ship and insurance brokers, managers of shipping property, freight contractors, &c. First directors, V. Matthews and B. W. Matthews (both permanent, subject to holding 10,000 ordinary shares) and E. J. Vuilleumier. Remuneration of E. J. Vuilleumier, £1,000 per annum. Secretary, W. H. Wilson. Registered office, 70, Cornhill, E.C. Private company.

NEWS PARAGRAPHS.

The Bergenske Dampskibsselskab (Bergen). This company is increasing its share capital from £166,000 to £276,000.

A Relic of the "Emden." One of the 4·1 in. guns from the *Emden* has been placed on the Horse Guards Parade, London, near the Admiralty Building.

The "Bismarck." The Hamburg Amerika Line has renamed the passenger steamer *Prince Bismarck* (built in 1905 at Glasgow) the *Friedrichsruh* in order to avoid confusion with the mammoth *Bismarck* built by Blohm & Voss, presumably now ready for service.

U.S. Submarine Building Capacity.—The plant of the Lake Submarine Boat Company, Bridgeport, Conn., which has been awarded contracts for three submarines for the United States Government, is to be increased to three times its present capacity so as to be able to lay down 30 submarines at one time.

No More Assistant Paymasters, R.N.R., Wanted.—The Secretary of the Admiralty states that as there is a long waiting list of applicants for commissions as assistant-paymasters, R.N.R., for the duration of the war, no further applications can be considered, and no additions will be made to the list.

Provisional Orders.—The Board of Trade have notified parties contemplating the promotion of Provisional Orders in respect of electric lighting, gas and water, piers and harbours, and tramways, that for the duration of the war they will not be prepared to entertain such applications except in cases in which they are satisfied that extreme urgency exists.

New Line.—A new line has been established in Gothenburg under the name Nord-Transport-Linie. Operation will not be commenced till after the war, when it is expected to have available the 2,255 ton Greek ss. *Demosthenes* (by purchase) and two steamers of 5,500 tons and two of 6,000 tons capacity, for which orders have been placed in New York and Philadelphia.

New San Francisco Dry Dock.—Plans for a dry dock to be built by the Union Iron Works at Hunter's Point, to be large enough to accommodate the largest battleship built or building, have been approved by the Secretary of the United States Navy. Representatives of the company announced that construction would begin immediately. The dock will be 1,000 ft. long, 110 ft. wide and will take vessels of 40-ft. draught.

Austrian Lloyd.—The Austrian Lloyd has decided upon a number of statutory changes, at an extraordinary general meeting called for the purpose. In future if one general meeting has not a quorum, the second may be held by any number of shareholders. During the war, depreciation allocation on vessels not in use is suspended. As regards insurance of vessels, about £30,000 has hitherto been covered by the insurance fund and the remaining 60 per cent. by a first-class company; now the word "minimum" is to be inserted before the 60 per cent. clause and the company insurance increased to 80 per cent.

German Ships Transferred.—In the House of Commons, Mr. Stewart asked the Secretary of State for Foreign Affairs whether His Majesty's Government, shortly after the outbreak of war, consented to the transfer of about 20 oil-carrying ships, of a collective capacity of some 150,000 tons, belonging to the German branch of the Standard Oil Company, from the German to the American flag; and, if so, what were the reasons that caused the Government to consent to this course, considering that, according to international law, they could have refused their consent? Sir E. Grey, replying, said the British and French Governments consented to respect the United States flag on these vessels on it being officially certified by the United States Government that the beneficial interests in them were American before the outbreak of war, and on condition that they were not employed in trading directly or indirectly with the enemy countries.

Emigrants' and Shipowners' Action.—Liverpool commercial men held a protest meeting on the Exchange Flags on Monday this week, and registered an emphatic protest against the action of the Government in allowing men of military age to leave the country, as emigrants to North America mainly. On Saturday the Cunard Company refused to allow several hundred of emigrants, principally Irishmen, to sail, following upon a protest from a number of the *Saxonia's* crew, who threatened to leave the ship if these deserters of their country were allowed to embark. Later the Cunard Company also gave instructions to their agents to refund the booking

fees to these intending emigrants, and to refuse in future to accept the bookings of British subjects who are fit and eligible for military service. The example of the Cunard Company was followed on Monday by the White Star and the Anchor Lines issuing similar instructions to their passenger booking agents.

Suspension of Cargo Services to Dieppe.—The London, Brighton & South Coast Railway Company announce that they cannot accept any goods to the Continent via Littlehampton and Dieppe or via London Docks and Dieppe until further notice.

Coal Export Licences.—The attention of exporters of coal and gas coke is specially directed to the announcement issued by the War Trade Department on October 14, in which it was intimated that on and after November 1 it would be necessary for a revised form of application for a licence to be used. As applications are still being made on the old form, it is advisable to warn exporters that their applications cannot be considered by the Coal Exports Committee unless the new form (dark blue) containing a declaration that the proposed shipment is in pursuance of an existing contract or in execution of a definite order, is used. Any applications received on the old form must therefore be returned. The new forms are obtainable at the Custom House at coal ports.

Boston Harbour.—The United States Coast and Geodetic Survey, which has been using a wire drag in searching for obstructions to navigation at various points, reports that a rock with 24 ft. over it lies nearly 1⅞ miles 92 deg. true (E.S.E. ½ E. mag.) from Minots Ledge Lighthouse, and three-eighths mile north-eastward of a rock with 25 ft. over it previously reported on the track recommended for vessels bound from Boston to Plymouth and the Cape Cod Canal. The survey says that it is advisable for vessels of a greater draught than about 18 ft., and also for all vessels in a heavy sea, to avoid these spots by passing eastward of the black can buoy which marks the charted 3½-fathom spot lying 2⅜ miles eastward of Minots Ledge Lighthouse.

Fore River Extensions.—The Fore River Shipbuilding Corporation, Quincy, Mass., has ordered extensive additions to its facilities, consisting of new ways of the double type, 138 ft. wide, and capable of building a battle cruiser 100 ft. broad or other large warship, or two ships not over 60 ft. beam. The ways will be 800 ft. and located under a gantry to carry the travelling cranes. The yard now has nine slips. A ship tool shop, to cost $500,000 without equipment, is under way. A $600,000 power-house is being arranged for and an oxygen plant, to cost $20,000, will soon be built. The company buys from 15,000 to 20,000 ft. of oxygen weekly. Plans are under way for extending the yard across Bens Creek to land owned for 20 years, but never used. A seawall is to be built, and behind it will be solid fill, so that this waterfront may be used for fitting out. Thus, crowding of the present yard will be relieved. It is estimated that the expenditures for building and equipment will cost two millions.

The Panama Slides.—Writing under date October 11, Lloyd's agent says:—"I confirm my telegram this evening informing you that there have been further activities in the canal slides and that the authorities do not advise vessels to wait in the hope of obtaining passage by November 1. The repeated activities make it quite impossible to predict when the channel will be open, and as a fact it appears that the inrush often exceeds the output. According to information I have received, more or less reliable, the slide has formed a peninsula, and has a bulk of some 10,000,000 cubic yards. This peninsula must be dredged out before a channel can be dug for transit vessels. The height of this peninsula is daily increasing, and a couple of days ago had a height of 15 to 20 ft. above water-level. The area in motion measures 175 acres, extending about 2,000 ft. along both banks of the waterway, with about 1,500 ft. back of the centre of the canal prism. Some persons competent to judge believe that there are only two practical methods to secure a channel not liable to obstruction: (1) Taking the hill away; (2) changing the course of the canal so that the channel will be around the hill instead of through it, as at present. Both of these methods will be expensive and take time to carry out."

Advisory Committee of Shipowners.—Dr. Macnamara, the Secretary of the Admiralty, states that the functions of the Advisory Committee of Shipowners, which has been appointed to Assist the Transport Department of the Admiralty, and consists of Mr. T. Royden, representing the passenger liners; Mr. E. W. Glover, representing tramp steamers; and Mr. R. D. Holt, M.P., representing cargo liners; consist, generally speaking, in advising the Director of Transports on questions in which it may appear that the general interests of the mercantile marine are affected by the operations of the Transport Department. The Committee naturally cannot express any opinion on the necessity or otherwise of requisitions for the conduct of naval or military operations. Apart from this they have every opportunity of advising the Transport Department on the use of tonnage as far as it is within the control of that department. They also advise on all questions relating to proportionate requisitioning of shipowners' fleets, including the suitability of steamers for the specific requirement in so far as it is not determined by the technical officers of the Admiralty. All applications for release of tonnage come before them. The Committee work in the closest personal touch with the Transport Department, which has found their advice invaluable.

Shipping at Swatow.—In his report on the trade of Swatow (China) for the year 1914, His Majesty's Consul, Mr. Pitzipios, says that the returns for 1914 show 2,424 vessels entered and cleared, with a total tonnage of 2,793,566—an average of 1,152 tons per vessel. British shipping in 1914 carried 76·3 per cent. of the total foreign and coast trade in 61·2 per cent. of the total tonnage, as compared with 78·5 and 59·9 per cent. respectively in 1913. There has been a fairly good demand for tonnage on the coast throughout the year, and rates from northern ports to Swatow have been maintained at a steady level. The trade of the port has not, however, called for any supply of tonnage beyond the normal, and, as usual, the demand has been almost entirely met by the regular liners. The services of the North German-Lloyd Orient Line to Singapore and Bangkok were suspended at the outbreak of the war, and were then taken up by the China Navigation Company, Ltd. German shipping shows a decrease of 154 vessels, aggregating 159,975 tons, as compared with 1913. Four German steamers remain in this port, laid up since the beginning of the war. The China-Siam Steamship Company has continued to maintain a service to Bangkok with three chartered Norwegian steamers. The war has proved the salvation of this Chinese company, which, just before the outbreak of the war, he says, was considered to be on its last legs; but, with the enforced retirement of the North German-Lloyd from the Bangkok trade, the rate-cutting competition between the two companies came to an end and full rates having since prevailed, the China-Siam Steamship Company should now be doing well. The prohibition of the immigration of Chinese coolies into the Straits Settlements considerably curtailed the demand for tonnage to Singapore; but even had the demand been normal there would have been no difficulty under the conditions existing after August in supplying the shortage in tonnage caused by the absence of the German ships.

U.S. Torpedo Boat Destroyers and Submarines.—The Navy Department of the United States has awarded the contracts for construction of six torpedo boat destroyers and 16 coast defence submarines. These contracts total more than $13,000,000. Part of the work is to be done by the Government itself. The following are the submarine awards: Eight to the Electric Boat Company, at $545,000 each. Three to the Lake Torpedo Boat Company, at $545,000 each. Three to the California Shipbuilding Company (Lake design), at $548,500 each. One to the navy yard, Portsmouth, N. H. One to the navy yard, Puget Sound, Washington. The vessels to be built at the navy yards will be after the designs of the Electric Boat Company's patents, for which the Government will pay $1,000 for each boat. The following are the awards for the construction of destroyers:—Two vessels to the William Cramp & Sons Co., Philadelphia, at $845,000 each. One to the Seattle Dry Dock and Construction Company, at $885,000. One to the Bath Iron Works, Bath, Me., at $879,500. One to the navy yard, Mare Island, Cal., in accordance with its estimate of $762,638. One of the Norfolk (Va.) Navy Yard, in accordance with its estimate of $706,305. The principal characteristics of the new destroyers will be:—Length over all, 315 ft.; beam, 30 ft. 7 in.; draught, 8 ft.; displacement, 1,125 tons. They will mount a number of 4-in. Q.F. guns, two anti-aircraft guns and four triple torpedo tubes. Propulsion will be by oil fuel fired water tube boilers and turbines, and they will have a speed of 30 knots.

The "British Prince" and "Pachitea" Losses.—The loss of the steamer *British Prince* will prove a serious one both for her owners and the marine insurance market. This fine vessel stranded on Possession Island, off the coast of the late German South-West Africa, on November 1, and on first reports seemed to

have a fair chance of getting off, 50 guineas per cent. being quoted at Lloyd's against the risk of total loss. The passengers, mails and other valuable interests were taken out of her and some cargo was jettisoned in an endeavour to float her. Later reports showed her to be in a more serious position, and the rate against total loss rose to 90 guineas per cent., while the latest advices show her position to be hopeless. The *British Prince* was completed in August, 1914, being built for the Prince Line, Ltd., by Short Bros., Ltd. She was a steel screw steamer of 5,936 tons gross register, fitted with electric light and wireless installations. Her insurance, which was on the t.p.n. basis, was done on a value of £101,000, but the policies were on the point of expiry when the casualty occurred, and in the event of the new policy coming into force the value would have been considerably increased. Another serious loss is that of the Peruvian steamer *Pachitea*, which struck a reef at Lomas whilst on a voyage from Callao to a Peruvian port with a cargo of sugar. She was beached near Lima, but her holds and engine rooms quickly filled, while heavy weather setting in removed all hope of salvage. In this case the loss of both hull and cargo will fall largely on the London market. She was a steamer of 4,767 tons gross register, built by the Chantiers de Normandie at Rouen in 1911. Fitted with electric light and wireless and carrying engines by the Chantiers et Ateliers de St. Nazaire. Her owners were the Cia Pernana de Vapores y Dique del Callao, and she was insured on a value of £76,500. This is the second serious loss which her owners have suffered, their previous disaster being the abandonment of the steamer *Huallaga*, which was burnt in 1910 on her maiden voyage whilst carrying oil from Panama to Peru.

ORDERS PLACED.

The Ward Line, New York, is now having built four steamers, of which two will be passenger boats. Two of the boats are to be built at Seattle by the Seattle Construction & Drydock Company and two by Cramp's, Philadelphia. The Seattle boats will be delivered in June and September, 1916, respectively and the Cramp boats within 20 months.

The A. H. Bull Steamship Company, New York, is reported to have placed another order for two cargo boats, to be constructed at the Sparrow's Point yards of the Maryland Steel Company. The contract price is reported to be approximately $800,000 for each boat. It is also reported that these boats are designed for service on the Pacific Coast.

The Coastwise Transportation Company of Boston has ordered a 12,000-ton d.w. steamer from the New York Shipbuilding Company, of Camden, N.J., with which it already had contracted for six boats. This ship will be the largest of all. Another contract—for a 9,000-ton d.w. steamer—is contemplated. All this tonnage is designed for coal-carrying and is already chartered for years ahead.

The Great Lakes Engineering Works, of Detroit, are reported to have booked an order from the Merritt & Chapman Company, of New York, for the construction of a steel steamer of Welland Canal size, suitable for salt water navigation. The vessel is to be delivered on or before May 1, 1916. The same shipbuilding company has also secured an order for a steel freighter of special type for Atlantic coast trade.

"SHIPBUILDING AND SHIPPING RECORD" TABLE OF MARINE CASUALTIES

(Including losses incidental to the war).

Vessel.	Gross Tonnage.	Owners, Builders and Year Built.	Casualty.
Alastair, ss.	366	J. & W. Henderson (J. & W. Henderson), Aberdeen. J. Duthie, Sons & Co., Aberdeen (1902).	Nov. 7: Reported "sunk."
British Prince, ss.	5,936	Prince Line (J. Knott), Newcastle. Short Bros., Sunderland.	Nov. 3: Ashore, Possession Island. Position dangerous. Holds full of water. Removing military stores, ship's fittings. Nov. 5: Lloyd's Surveyor reports total loss.
Buresk, ss.	3,673	Burdick & Cook, London. Richardson, Duck & Co., Stockton (1914).	Nov. 9: Reported "sunk."
Claus Horn, ss.	2,690	H. C. Horn, Lubeck. Akt. Ges. "Neptun," Rostock (1907).	Nov. 6: Stranded off Swedish coast trying to avoid submarine. Now total loss.
Corona, ss.	1,550	Akties. H. M. Wrangell & Co., Haugesund. H. F. Ulrichs, Vegesack (1882).	See *S. & S.R.*, Nov. 4. Nov. 2: Abandoned after springing a leak off Butt of Lewis. Subsequently foundered.
Dahra, ss. (ex *Cusset*)	2,127	Delmas frères, La Rochelle. J. L. Thompson & Sons, Sunderland (1891).	Nov. 4: Sunk by enemy submarine off Arzeu (Algeria).
Friargate, ss.	284	A. Chester, Middlesbrough. Crabtree & Co., Great Yarmouth (1910).	Nov. 3: Reported "sunk."
Gedania, ss.	1,477	Behnke & Sieg, Danzig. Palmers Co., Newcastle (1879).	Nov. 2: Reported sunk by British submarine. Nov. 3: Foundered in Baltic through torpedo or striking a mine.
Glenmoor, ss.	3,075	Walter Runciman & Co., Newcastle. J. Priestman & Co., Sunderland (1894).	Nov. 9: Reported "sunk."
Ionio, ss. (ex *Les Palmes* (ex *Gr. Bretagne*))	1,816	Cav. G. Trucco, Palermo. Wigham, Richardson & Co., Newcastle (1886).	Nov. 5: Sunk by enemy submarine off Algiers.
Rosyth, ss.	376	Kirkcaldy SS. Co. (W. H. H. Hutchinson and W. Williamson), Kirkcaldy. Dundee Shipbuilders' Co., Dundee (1903).	Nov. 3: Ashore at Whitburn, near Sunderland. Damaged engine room; water in cargo space and bilges. Sea still heavy. Nov. 7. Re-floated off Whitburn.
Santa Clara, ss.	1,588	North Pacific SS., San Francisco. C. H. White, Everett, Washington (1900).	Nov. 3: Wrecked off Coos Bay. Nov. 4. Total loss.
Suomi, ss.	1,016	H. M. Gehrckens, Hamburg. Schiffsw. v. Henry Koch, Lubeck (1906).	Nov. 3: Torpedoed by British submarine in Baltic.
Susanne, ss.	370	Johann Reimer, Stettin. H. Murray & Co., Port Glasgow (1872).	Oct. 30: Attacked by British submarine in Baltic and damaged.
Tara (British auxiliary)	—	—	Nov. 15: Attacked by enemy submarine in Eastern Mediterranean and sunk.
Turquoise (French submarine)		—	Nov. 3: Sunk by gun fire in Sea of Marmora.
U. 8 (German submarine)		—	Nov. 4: Brought into Terschelling (Holland) in distress and interned.
Undine (German cruiser)	—	—	Nov. 7: Sunk by British submarine in Baltic.
Warrior, ss.	3,674	Thos. Turnbull & Son SS. Co. (T. Turnbull & Son), Whitby. T. Turnbull & Son, Whitby (1901).	Nov. 5: Collided with another steamer. Extensive damage. Breaking bulwarks, port side and firemen's forecastle.
Woolwich, ss.	2,936	Britain SS. Co. (Watts, Watts & Co.), London. R. Dixon & Co., Middlesbrough (1887).	Nov. 8: Reported "sunk."

OFFICIAL NOTICES AND SHIPS FOR SALE.

FOR SALE.

(PARTICULARS NOT GUARANTEED.)

Folio 9047.—New Steamer now building. About 7,900 tons d.w. on about 22 ft. 3 in. draught. Single Deck. Long Bridge. Triple Engines. Three Single-ended Boilers. Estimated speed about 10 knots on about 26 tons.

Folio 9127.—Built 1910. Surveyed 1914. About 7,450 tons d.w. on about 23 ft. 2 in. draught. Single Deck. Triple Engines. Three Single-ended Boilers. Speed about 10 knots on about 28 tons. Early delivery.

Folio 8632. Built 1900. Surveyed 1913. About 6,050 tons d.w. on about 22 ft. 9 in. draught. Single Deck. Triple Engines. Two Single-ended Boilers. Speed about 9 knots on about 20 tons.

Folio 7884.—Built 1899. Surveyed 1912. About 5,800 tons d.w. on about 21 ft. 9 in. draught. Single Deck. Triple Engines. Two Single-ended Boilers. Speed about 9/9½ knots on about 18 tons.

Folio 8384.—Built 1893. Surveyed 1915. About 4,150 tons d.w. on about 22 ft. draught. Part awning Deck. Triple Engines. Two Single-ended Boilers. Speed about 9 knots on about 15 tons.

Folio 8203.—Built 1901. About 3,450 tons d.w. on about 18 ft. 3 in. draught. Single Deck. Triple Engines. Two Single-ended Boilers. Speed about 8½ knots on about 13 tons.

For further Particulars, Plans, Prices, &c., apply to :—

THOS. PINKNEY & SONS,
Sunderland.

Telegraphic Address—"Spardeck."

OFFICIAL NOTICES AND SHIPS FOR SALE.

OFFICIAL ADVERTISEMENTS intended for insertion on this page should be sent in as early in the week as possible. The latest time for receiving official advertisements for this page for the current week's issue is noon on Wednesday.

All advertisements should be addressed to—
Shipbuilding and Shipping Record,
Queen Anne's Chambers,
Westminster, London, S.W.

"SHIPBUILDING AND SHIPPING RECORD" TABLE OF SHIP SALES.

Name and type.	Tonnage.	Dimensions. Draught in ( ).	Sold by, to	Builders, hull and year.	Machinery and builders.	Remarks.
Aldersgate, ss....	3,687 gr. 2,364 net. 6,260 d.w.	346′ × 50¼′ × 22¼′ (21½′)	Dowgate SS. Co. (H. W. Dillon), London, to Brys & Gylsen, London	Bartram & Sons, Sunderland (1906)	24½, 40, 66 × 45 (J. Dickinson & Sons, Sunderland)	
Aldgate, ss. (spar dk.) (ex *Langdale*)	3,547 gr. 2,294 net. 6,010 d.w.	339½′ × 46′ × 17¼′ (23¼′)	Dowgate SS. Co. (H. W. Dillon), London, to Brys & Gylsen, London	Russell & Co., Port Glasgow (1903)	24, 40, 65 × 45 (D. Rowan & Co., Glasgow)	—
Aikaterini, ss. (pt. awning dk.) (ex *Virtus*, ex *Starcross*)	2,823 gr. 1,822 net. 4,610 d.w.	307′ × 41′ × 20⅝′ (22⅜′)	Pandeli Bros., Constantinople, to Norwegian buyers	Richardson, Duck & Co., Stockton (1894)	22½, 37, 61 × 42 (Blair & Co., Stockton)	Price about £46,000. Changed hands in Feb., 1912, for about £14,500.
Balboa, ss. (spar dk.)	1,324 gr. 829 net. 1,850 d.w.	239′ × 33¼′ × 12½′ (18¾′)	Balboa SS. Co. (R. MacAndrew & Co.), Liverpool, to British buyers	Wood, Skinner & Co., Newcastle (1894)	19, 31, 51 × 33 (N.E. Mar. Eng. Co., Sunderland)	—
Cadmus, ss. ...	1,879 gr. 1,170 net. 3,230 d.w.	279′ × 40′ × 18½′	J. Gaff & Co., Glasgow, to British buyers	Irvine's S.B. & D.D. Co., W. Hartlepool (1911)	20½, 33, 54 × 36 (Richardsons, Westgarth & Co., Hartlepool)	Price about £43,000.
Chorley, ss. (shelter dk.), re-named **Tongrier**	3,828 gr. 2,468 net. 7,210 d.w.	340′ × 48′ × 25¼′ (25½′)	Tatem S.N. Co. (W. J. Tatem), Cardiff, to Brys & Gylsen, London	Richardson, Duck & Co., Stockton (1901)	26, 42½, 69½ × 45 (Blair & Co., Stockton)	Price about £60,000. Sold in 1909 for about £21,956.
Demetrios Fafalios, ss. (ex *Mab*)	2,833 gr. 1,846 net. 4,410 d.w.	314½′ × 40½′ × 20½′ (22½′)	J. Fafalios, Chios, Ægean Sea, to buyers not stated	W. Gray & Co., W. Hartlepool (1891)	23, 36½, 62¼ × 39 (Cen. Mar. Eng. Works, W. Hartlepool)	Price about £28,000.
Demosthenes, ss. (well dk.) (ex *Zoe*)	2,255 gr. 1,437 net. 3,440 d.w.	289′ × 38¼′ × 19½′ (20½′)	D. & N. Rallias, Andros, to Swedish buyers	T. Turnbull & Son, Whitby (1889)	22, 36, 59 × 39 (Blair & Co., Stockton)	Price about £22,500.
Hillerod, ss. (well dk.) (ex *Soturios*)	2,942 gr. 1,913 net. 4,355 d.w.	314′ × 40½′ × 20¾′	Dmpsk. Sjalländ Acties. (Brix-Hansen & Co.), Copenhagen, to Atlanterhavet Co., Copenhagen	Irvine & Co., W. Hartlepool (1892)	23, 37½, 61½ × 39 (T. Richardson & Sons, Hartlepool)	Price about £36,000. Sold in August last year for about £30,000.
Lalandia, ss. re-named **Kangaroo**	4,250 gr. 6,710 d.w.	365′ × 50¼′ × 26½′	Akties. det Ostasiatiske Kompagni, Copenhagen, to West Australian Government	Harland & Wolff, Irvine (1914)	Oil engines, 4 s. C.S.A. ...	Price about £140,000.
Leonidas, ss. (ex *Chariclea*, ex *Onega*)	1,759 gr. 1,100 net. 3,210 d.w.	273′ × 37½′ × 21¼′ (19¾′)	Domestini and Oeconomou, Piræus, to Norwegian buyers	J. Laing, Sunderland (1894)	20, 32½, 53½ × 36 (N.E. Mar. Eng. Co., Sunderland)	Price about £33,500. Sold in Feb., 1907, for about £13,500.
Maracas (Prize steamer) (ex *Carmarthenshire*)	2,925 gr. 1,856 net.	329½′ × 40′ × 25′	Formerly by New York Transatlantic SS. Co. Sold by auction per C. W. Kellock & Co. on Nov. 9 to Norwegian buyers	C. S. Swan & Hunter, Newcastle (1887)	27½, 43, 70 × 45 (Hawthorn, Leslie & Co.)	Price £30,000.
Nancy Lee, ss. (spar dk.) (ex *Minterne*)	2,823 gr. 1,802 net. 4,855 d.w.	316′ × 42′ × 17′ (22⅛′)	Preston S.N. Co. (F. E. R. Becker), London, to British buyers	Short Bros., Sunderland (1898)	23, 38, 62 × 42 (J. Dickinson & Sons, Sunderland)	Price about £43,000. Sold in 1909 for about £22,455.
Northam, ss. (shelter dk.) re-named **Normandier**	3,842 gr. 2,475 net. 7,210 d.w.	340′ × 48′ × 25¾′ (25½′)	Tatem S.N. Co. (W. J. Tatem), Cardiff, to Brys & Gylsen, London	Richardson, Duck & Co., Stockton (1902)	26, 42½, 69½ × 45 (Blair & Co., Stockton)	Price about £60,000.
Oratios Couppas, ss.	3,069 gr. 1,846 net. 5,410 d.w.	345′ × 47′ × 21¼ (20¼′)	N. Couppa, Argostoli, to Fred. T. Berg, Porsgrund	Craig, Taylor & Co., Stockton (1908)	23½, 39, 64 × 42 (Blair & Co., Stockton)	Price about £72,250.
Orla, ss.... ...	4,032 gr. 2,536 net. 7,000 d.w.	355½′ × 50¾′ × 24¾′ (22¾′)	A. Bergvall, Christiania, to I. Christensen, Christiania	Tyne I.S.B. Co., Newcastle (1914)	25, 41, 68 × 45 (N.E. Mar. Eng. Co., Newcastle)	Price about 125,000 kr.
R. F. Berg, ss. (well dk.) (ex *Cairnglen*)	1,547 gr. 921 net. 2,405 d.w.	251′ × 36′ × 16¾′ (17¾′)	Limhamns Rederiakt (E. Persson), Limhamns, to Olsen & Ugelstad, Christiania, per J. H. Käll, Gothenburg	W. Dobson & Co., Newcastle (1891)	19, 31, 51 × 36 (Black, Hawthorn & Co., Gateshead)	— Price about £26,500. Sold in July, 1912, for about £10,350.
Towergate, ss.	3,697 gr. 2,358 net. 6,255 d.w.	346½′ × 50¾′ × 22¼′ (21¾′)	Dowgate SS. Co. (H. W. Dillon), London, to Brys & Gylsen, London	Bartram & Sons, Sunderland (1906)	24½, 40, 66 × 45 (J. Dickinson & Sons, Sunderland)	—
Turret Chief, ss. (turret dk.)	1,881 gr. 1,197 net. 3,205 d.w.	253′ × 44′ × 19½′	Canadian Lake & Ocean Navigation Co., Montreal, to London buyers	W. Doxford & Sons, Sunderland (1896)	20, 34, 57 × 39 (W. Doxford & Sons)	—

SHIPPING SHARE MARKET.

Once more the securities of steamship companies have again been prominent, not a little of the activity being due to the special articles which have appeared in the daily press from naval correspondents pointing out the great dearth of shipping at the present time for mercantile purposes. The average earnings this year are estimated on the Stock Exchange to amount at least to from £3 to £4 per ton deadweight, in fact, some steamers are reported to have secured these amounts as the result of from three to four months' trading. Prior to the war the general public has very largely left the market in shipping companies' securities to the professional operator and the expert engaged in the business. But the conditions which have made for an exceptional and extraordinary demand for shipping are such as can be easily grasped by the average man, with the result that the demand for shares is now coming from an ever-widening circle; indeed, it is not too much to say that there are signs of higher prices being reached in Stock Exchange quotations than for many years past. A sign of the times is the fact that one enterprising firm of provincial stockbrokers has compiled and published this week a 64 page booklet containing summaries of the latest accounts of shipping companies. Royal Mail shares continue to recover their price. No less than 18 bargains were marked in Royal Mail Ordinary on Friday last. Both the deferred and preferred stocks of the Peninsular & Oriental Company have also advanced.

There have been dealings in most of the more prominent companies' issues, such as Furness-Withy, Cunard, Elder Dempster, and Indo-China at satisfactory prices. The activity in London-American Maritime Ordinary has died out, and the shares are back to 23s. 6d. In the shipbuilding section and kindred securities there has been less activity, but the more prominent companies' shares are still maintained at good prices.

SHIPPING, SHIPBUILDING, ENGINEERING AND MARINE INSURANCE SHARE LIST.

SHIPPING AND DOCKS.

Name	Share and paid.	Extreme quotations, 1913.	Last ann. div. % or per share.	Yield. %	Quotation, July 30, 1914.	Cash price during week.
	£					
African S.S.	20	21⅝—19 1/16	7	7⅜	18—20	18—20
Allan Line ... ... Deb.	100	95—89	4	4¼	93¼—95¼	94
Anchor Line ... Cum. pref.	10	10⅜—10	5½	5½	10—10½	10½
Do. ... ... Deb.	Stk.	98⅜—98⅜	4½	4 5/8	104—106	102¾
Argentine Nav. ... Cum. pref.	1	29/6—25/6	3	4⅛	9/16—11/16	11/16
Do. ... ... Deb.	Bds.	104⅜—100¼	6	6½	98—100	92
Australasian Un. S. Nav. Deb.	Stk.	84⅜—81½	4	4 13/16	80—83	80—83
Belfast Steam ... ... "A"	10 (5 pd.)	5⅜—4½	5	3	4¾—5¼	5
British & African Nav. Deb.	Stk.	102—101	4½	4⅝	96½—98½	99½
British India Nav. .. Deb.	Stk.	104—98⅜	4½	4¼	99½—100	95
Bucknall SS. ... Cum. pref.	2	2⅛—1¾	5½	—	—	—
Cairn Line ... ... Deb.	Bds.	102—94	5	5½	91—93	90½—91
Clan Line ... .. Ord.	10	14½—9	15	10½	10⅜—11	13 11/16
Court Line ... ... Ord.	£1	—	10	7 13/16	—	1 5/16
Cunard SS. ... ... Ord.	1	35/9—28/-	20	6⅜	1⅜—1½	3 1/16
Do. ... Cum. pref.	Stk.	103—97½	5	5¼	99—101	91
Do. ... ... Deb.	Stk.	102⅜—99	4½	4¼	101—103	96
Elder Line ... ... Deb.	Stk.	103—100	4½	5	98—102	90
Elder Dempster ... Cum. pref.	1	1 1/32—15/16	5½	5 11/16	15/16—1 1/16	15/16
Do. ... ... Deb.	Stk.	105—99½	5	5¼	102—104	91½
Ellerman Lines ... Pref. Ord.	10	10⅜—10 7/16	6¼	6	10—10½	9½
Do. ... Cum. pref.	10	10 5/16—10 5/16	4½	4⅝	10—10½	9½
France Fenwick ... Cum. pref.	5	97/6—92/6	5½	6½	4¾—5	4⅜
Furness, Withy ... Ord.	1	34/3—25/6	10	6¼	1½—1⅝	1¼
Do. ... Cum. pref.	10	9¾—9¼	5	5¼	9½—10	8½
General Steam Nav. Ord.	7½	6 11/16—5½	6	7	5⅜—5⅞	6¼
Do. ... .. Pref.	8	7¾—7⅛	6	8	7¼—7¾	6¾
Houlder Line ... Cum. pref.	5	85/—60/-	Nil	Nil.	2⅜—2⅝	3 1/16
Do. ... .. Deb.	Stk.	84¾—80	4½	5¼	81—86	84½
Houlder Bros. ... Cum. pref.	5	4½—3	5⅜	5½	4⅜—4⅞	4¼
Do. ... ... Deb.	Stk.	85—78	4½	5⅜	81—86	82
India Gen. Nav. & Rly. ... Ord.	10	9¾—7 11/16	8	9½	9—10	9
Indo-China N. ... Pref Ord.	5	5 5/16—87/6	6	5½	3¾—4¼	5½
Irrawaddy Flotilla	40	125—114	15	5 1/16	126½—128½	—
King Line ... ... Ord.	10	9 11/16—8	8	7½	8¾—9¼	11¼
La Guaira Harbour ... Deb.	Stk.	87—79	5	7¾	78—80	66
Lamport & Holt ... Cum. pref.	£1	1 1/16—29/32	6	6	15/16—1 1/16	29/32
Leyland (F.) ... Cum. pref.	10	11—9⅜	10	13½	7¼—8¼	7 1/16
Do. ... ... Deb.	100	99½—95½	4	4	99—101	—
Mercantile SS. ... ... Ord.	5	8 1/16—6¾	17½	10½	6—6½	8½
Do. ... ... Pref.	1	18/-—16/3	5	5¼	¾—1	15/16
Moor Line ... ... Ord.	10	14—11 5/16	15	—	—	—
Nelson Steam Nav. ... Deb.	100	103½—99	5	5¼	99½—101½	96
New Zealand ... ... Ord.	£10	20½—10⅝	8	4¼	14½—15½	19 1/16
Do. ... ... Deb.	Stk.	95—92½	4	4¼	92—94	89½
Nitrate Producers SS. ... Ord.	5	8⅝—8	17½	6⅞	8—8½	12¼
Do. ... Cum. pref.	5	5—97/6	5	5	4½—5	4½—5
Oceanic Steam. Nav. ... Deb.	100	100—96½	4½	4¼	97—99	98½
Orient.Stm.Nav.Co. Cum. pref.	10	10⅜—9 5/16	5	5 1/16	9½—10	9½
Do. ... ... Deb.	100	99—94½	4½	4⅝	98—100	96
P. & O. S. N. ... Cum pref.	100	125½—107	5	5¼	109—112	97½
Do. ... ... Def.	100	350—270	15	5⅝	270—290	290
Do. ... ... Deb.	Stk.	91—83	3½	5	84—86	70½
Prince Line	1	25/3—20/-	5	2⅝	1—1⅛	2 1/16
R.M.S.P. ... ... Ord.	100	143—100⅜	Nil.	Nil.	82—87	92½
Do. ... ... Pref.	Stk.	100⅞—96	5	5¼	98—101	85¼
Do. ... ... Deb.	Stk.	104¾—100¾	4½	5¼	101—103	88½
Shaw, Savill & Alb. Cum. pref.	5	5 3/16—96/3	5	5	4¾—5	4¾—5
Shell Transport ... ... Ord.	1	5 11/16—96/10½	30	6½	4—4⅛	4½
Do. ... Cum pref.	10	11 7/16—10	5	5 1/16	10⅜—10⅝	9 3/32
Sutherland SS. Co.	£1	1¼—1	20	13½	1—1⅛	1⅜
Union-Castle SS. Cum. pref.	10	10—9½	4½	5	8¾—9¼	8
Do. ... ... Deb.	Stk.	95¾—92	4	4⅛	93—95	88
West Hartlepool ... ... Pref.	10	4¾—3 13/16	5½	9¼	2½—3½	5 15/16

INSURANCE.

Name	Share and paid.	Extreme quotations, 1913.	Last ann. div. % or per share.	Yield. %	Quotation, July 30, 1914.	Cash price during week.
Alliance	20 (2·4 pd.)	12 7/16—11⅝	12/-	7	11⅞—12⅝	8
Do. (new shares)	1	14 7/16—12⅞	12/-	5⅞	13½—14½	1½
Indem. Mutual Marine	15 (3 pd.)	10 1/16—8½	18¾	6 1/16	10—11	9½
London Assurance	25 (12½ pd.)	54—49	20	6	54—56	42½
Marine Insurance	25 (15 pd.)	38½—36½	45/-	6⅞	38¾—39¼	34½
Maritime Insurance	10 (2 pd.)	5½—4 11/16	12½	—	8 9/16—8⅜	—
Merchants' Marine Insurance ...	10 (2½ pd.)	66/3—61/3	7½	5	4—4¼	3½
N. British & Mercantile Ord.	25 (6¼ pd.)	40½—[illegible]	40/-	7⅛	40⅝—41½	27½
Do. Pref.	Stk.	100¾—95½	4	5¼	98—100	77½
Phœnix Assurance	10 (1 pd.)	7⅝—7	40	6½	7¾—8¼	5 15/16
Reliance Marine	10 (2 pd.)	7—6¼	17½	4 11/16	7 9/16—7¾	7
Royal Exchange Assurance ...	Stk.	210—196¼	10	5½	213—218	190¼
Sea Insurance	10 (2 pd.)	20—17½	8	4	20—21	
World Marine, Limited ...	5 (2 pd.)	25/—23/1½	5	5⅜	1 9/16—1 11/16	1 13/16

* With arrears. † Includes 2½ bonus.

IRON AND STEEL.

Name.	Share and paid.	Extreme quotations, 1913.	Last ann. div. % or per share.	Yield. %	Quotation, July 30, 1914.	Cash price during week.
	£					
Babcock & Wilcox... ... Ord.	1	69/4½—56/3	16	5½	2⅝—2⅞	2 1/16
Baldwins ... Cum. pref.	1	22/6—21/3	5½	5 15/16	1 1/32—1 5/32	1 3/32
Do. ... ... Deb.	Stk.	100¼—100¼	4½	4⅜	97—99	98
Bayliss, Jones ... Cum. pref.	1	—	5	7¼	½—⅝	⅝—11/16
Bell Bros. ... ... Cum. pref.	10	12 1/16—11	6	5 15/16	11⅝—12⅛	10 15/16
Do. ... ... Deb.	Stk.	98—96¾	4	4 1/16	96—98	96—98
Bessemer (Henry) ... Ord.	1	1 5/16—1 1/16	10	8⅜	15/16—1 1/16	1 1/16—1⅛
Bolckow Vaughan ... Ord.	1	22/6—19/4½	6	6⅛	1 1/16—1⅛	
Do. ... ... Cum. pref.	20	21⅛—20/-	5	5⅛	20—21	19¼
Cargo Fleet Iron ... ... Ord.	1	11/10½—7/6	2½	5	11/32—13/32	11/16
Do. ... ... Deb.	100	91—85½	4½	5¼	89—92	87
Consett Iron Co. ... ... Ord.	1	88/6—74/6	30	10½	3¾—3⅞	2 13/16
Dominion Iron & Steel	Bds.	100¼—88½	5	6¼	83—87	74½
Dorman, Long ... ... Ord.	1	21/6—16/9	7½	8¾	27/32—29/32	1 1/16
Do. ... ... Deb.	Stk.	88½—85½	4	4¼	87—90	84¼
Ebbw Vale Steel & Iron Ord.	1	18/—16/-	10	11½	25/32—27/32	
Guest, Keen & Ntteflds Ord.	1	68/9—61/3	15	4½	3 9/32—3 13/32	3¼
Do. ... ... Cum. pref.	5	5 3/32—5⅜	5	4⅝	5 9/16—5 13/16	5¼
Do. ... ... Deb.	Stk.	100⅝—95¼	4	4½	96—98	83½
Hadfield's Steel Foundry Ord.	1	63/—58/9	22½	6⅞	3—3⅛	3 7/16
Hawthorn (R. & W.) Leslie Ord.	10	13—12	10	7½	13⅛—13⅜	12¾—13⅛
Ibbotson Bros.	5 (4 pd.)	7—5¼	10	7 11/16	6—6¼	6—6½
Jessop (W.) & Sons ... Ord.	5 (4 pd.)	6⅝—6⅜	15	11 5/16	6⅜—6⅝	6⅝
Lanarkshire Steel Cum. pref.	10	7⅛—6¼	5	6 7/16	5¼—6½	6
Lysaght (J.) ... Cum. pref.	1	27/6—25/-	6	5	1¼—1⅜	1¼
Do. ... ... Deb.	Stk.	108½—102½	4½	—	104—106	—
Manganese Bronze ... Ord.	1	⅝—½	6	11	½—⅝	9/16
Do. ... ... Cum. pref.	1	1—⅞	6	6 3/16	¾—1	¼
North-Eastern Steel ... Deb.	Stk.	89—92	4½	—	—	—
Palmers Ship & Iron "A"	1	5/16—3/16	Nil.	Nil.	5/32—9/32	¼
Scott (Walter) ... ... Ord.	1	16/—14/6	5	6 11/16	½—¾	¾
Do. ... ... Deb.	Stk.	86—82	4	4⅜	81—82	89—91
Sheffield Forge ... ... Ord.	1	1⅞—1½	12½	7	1⅝—1¾	1 3/32
Shelton Iron & Steel ... Deb.	100	99½—90	5	5⅜	93—98xd	94⅝
S. Durham Steel & Iron Ord.	1	35/—23/6	10	6 15/16	1 5/16—1¼	1⅝
Do ... ... Cum. pref.	1	20/6—19/-	6	5 15/16	31/32—1 1/32	1 1/16
Do. ... ... Deb.	Stk.	95—98	4½	4⅜	90—92	90—92
Steel Co. of Scotland ... Ord.	10	12⅜—8¾	5	5⅝	8½—9	8¾—9¼
Stewarts & Lloyds Pref. ord.	10	21 1/16—20	10	5⅛	20—21	19⅞
Do. ... ... Cum. pref.	10	14 5/16—13¼	6	4½	11 3/16—13 7/16	13 15/16
Stone (J.) ... ... Cum. pref.	10	9⅜—9	5	5⅜	8¾—9¼xd	9 1/16
United States Steel ... Ord.	100$	71½—50	3	3¼	61—61½	92
Do. ... ... Cum. pref.	100$	113¾—104½	7	5¼	112—113	123⅛
Vickers Ltd. ... ... Ord.	1	43/6—33/3	12½	7¼	1 11/16—1¾	1⅜
Do. ... ... Pref.	Stk.	106¼—99	5	5	104—107	100
Do. ... ... Deb.	Stk.	100½—91½	4	4⅞	96½—98½	82¼
Weardale Steel ... Def. ord.	1	21/—17/-	6	7½	⅞—14/16	¼
Do. ... ... Cum. pref.	1	20/1½—18/-	6	6⅝	15/16—1	13/16
Do. ... ... Deb.	Stk.	77—73½	4	5	77—80	77—80
Workington Iron & Steel Ord.	1	16/6—12/3	6	8½	21/32—23/32	11/16

SHIPBUILDING AND MARINE ENGINEERING.

Name.	Share and paid.	Extreme quotations, 1913.	Last ann. div. % or per share.	Yield. %	Quotation, July 30, 1914.	Cash price during week.
Armstrong, Whitworth Ord.	1	60/—39/	12½	6	1 31/32—2 1/32	1¼
Do. ... ... Cum. pref.	5	95/—84/6	4	5½	4 9/16—4 13/16	3 11/16
Do. ... ... Deb.	Stk.	98¾—94½	5	6¼	96—98	79½
Beardmore (W.) ... ... Deb.	100	96¾—91¼	4½	5⅛	94—96	89
Brown (John) ... ... Ord.	1 (15s. pd.)	23/—17/9	12½	9½	29/32—31/32xd	21/32
Do. ... ... Cum. pref.	10	10¼—9 13/16	5	5 1/16	9¾—10xd	8 29/32
Cammell Laird ... ... Ord.	5	3½—2¾	7½	7⅝	3⅞—4⅛	4⅛
Do. ... ... Cum. pref.	5	92/6—79/-	5	6¼	4¼—4½	3 31/32
Do. ... ... Deb.	100	90½—84¼	4½	5	92—94	90
Dunlop (Jas.) ... ... Ord.	1	18/6—17/6	Nil.	—	19/32—29/32	11/16
Do. ... ... Cum. pref.	1	1⅛—⅞	6	7⅛	⅞—1	29/32
Fairfield Shipbldg Cum. pref.	10	10—7½	6	8 3/16	—	7⅝
Fleming & Ferguson ... Ord.	10	20¼—12¾	10	6¼	14¼—14¾	14¾
Gray (Wm.) ... ... Deb.	100	100½—100	4½	4½	100-102	100⅞
Henderson (D. & W.) Cum. pref.	1	⅞—7/16	5	12	7/16—9/16	⅜
Richardsons Westgarth Ord.	1	3/6—1/9	Nil.	Nil.	1/16—⅛	⅛
Do. ... ... Cum. pref.	1	9/9—4/3	Nil.	Nil.	3/16—¼	⅛
Do. ... ... Deb.	Stk.	70—58	4½	6½	55—58	69½
Simons (W.) ... Cum. pref.	10	10½—10	5	4⅞	10¼—10½	10¼
Stephenson (R.) ... ... Ord.	1	66½—53	Nil.	Nil.	—	
Do. ... ... Deb.	Stk.	66¼—63	Nil.	Nil.	—	—
Swan, Hunter & W. R. ... Ord.	1	19/10½-16/-	†10	10½	15/16—1	1¼
Do. ... ... Cum. pref.	1	19/9—17/9	5	5⅜	15/16—1	15/16
Do. ... ... Deb.	Stk.	90½—88	4¼	4 9/16	90—93	90—93
Thornycroft (John I.) ... Ord.	1	27/6—12/6	8	8	⅝—⅞	1⅛
Do. ... ... Cum. pref	1	19/3—11/3	6	7⅝	⅝—¾	¾
Do. ... ... Deb.	100	94—91	5	5 7/16	88—92	93¼
Wallsend Slipway ... Ord.	1	1 1/16—15/16	10	—	1⅜—1½	—
Do. ... ... Cum. pref.	1	20/—20/-	5	—	15/16—1 1/16	-

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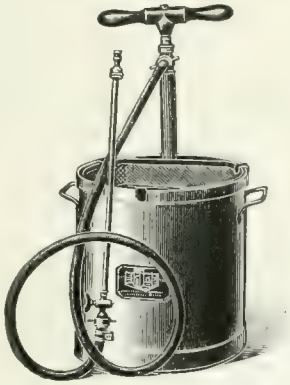

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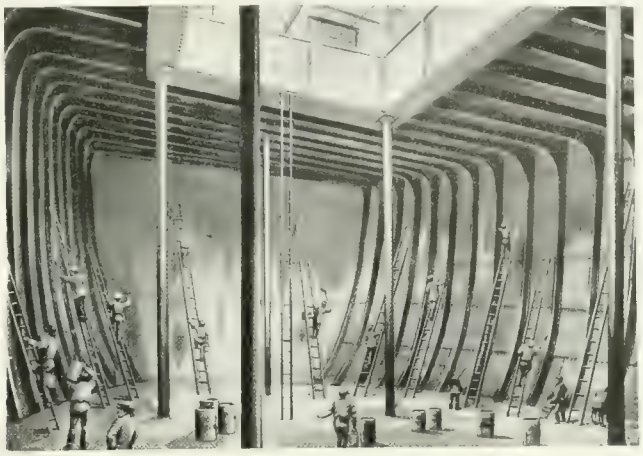

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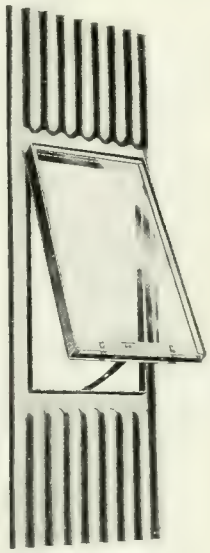

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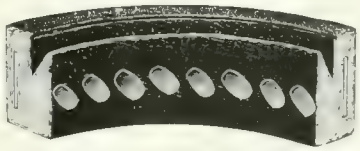

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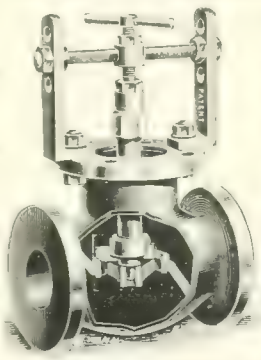

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Buyers' Guide.

LIST OF THE LEADING MAKERS OF SHIPBUILDING & SHIPYARD & DOCK MACHINERY, APPLIANCES, PLANT & STORES.

ACCOMMODATION LADDERS—
Linkleter's Patent Ship Fittings Co., Hudson St., North Shields.

ACETYLENE—
Carbic Ltd., 51, Holborn Viaduct, London, E.C.

AERIAL ROPEWAYS—
Bullivant & Co., Ltd., 72, Mark Lane, London, E.C.

AIR COMPRESSORS—
Belliss & Morcom, Ltd., Birmingham.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Heinke, C. E., & Co., 88, 89, Grange Road, Bermondsey, S.E.

AIR PUMPS—
Allen, W. H., Son & Co., Ltd., Queen's Engineering Works, Bedford.
Belliss & Morcom, Ltd., Birmingham.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Dawson & Downie, Elgin Works, Clydebank.
Heinke, C. E., & Co., 88, 89, Grange Road, Bermondsey, London, S.E.
Richardsons, Westgarth & Co., Ltd., Hartlepool.
Weir, G. & J., Ltd., Cathcart, Glasgow.

ALUMINIUM GOODS—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.

ALUMINIUM PAINT—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.

ANCHORS—
Byers, W. L., & Co., Ltd., Tavistock House, [Sunderland.
Hingley & Sons, Ltd., Netherton Iron Works, Dudley, Staffs.
Spencer, John, & Sons, Ltd., Steel Works, Newburn-[on-Tyne.
Sykes, Richard, & Son, Ltd., Cradley Heath.
Taylor, Samuel, & Sons (Brierley Hill), Ltd., Brierley Hill, Staffs.
Wright, Joseph, & Co., Ltd., Tipton, Staffs.

ANTI-CORROSIVE COMPOSITIONS—
Briggs, W., & Sons, Ltd., Dundee.
Hamilton, Archd., & Co., Possilpark, Glasgow.
Holzapfels, Ltd., Newcastle-on-Tyne.
Hoyle, Robson, Barnett & Co., Ltd., St. Nicholas Chambers, Newcastle-on-Tyne.
Milburn, A., & Co., Sunderland.
Wailes Dove Bitumastic Ltd., 5, St. Nicholas Buildings, Newcastle-on-Tyne.
Websters Ltd., Hull.

ANTI-FOULING COMPOSITION—
Holzapfels, Ltd., Newcastle-on-Tyne.
Hoyle, Robson, Barnett, & Co., Ltd., St. Nicholas Chambers, Newcastle-on-Tyne.
Websters Ltd., Hull.

ANTI-FRICTION METALS—
Billington & Newton, Ltd., Longport, Staffs.
Bowran, Robt., & Co., Ltd., Newcastle-on-Tyne.
Delta Metal Co., Ltd., East Greenwich.
McConnell, A., & Co., Ltd., 60, Drury Buildings, Water Street, Liverpool.

ARMOUR PLATES—
Brown, John, & Co., Ltd., Atlas Works, Sheffield.

ASBESTOS FITTINGS—
McRobie, John, & Sons, 94, Elliott Street, Glasgow.

ASBESTOS GOODS—
Cranstonhill, Glasgow.
Beldam Packing & Rubber Co., Ltd., 1 and 2, Gracechurch Street, London, E.C.
Jones, Fredk., & Co., Ltd., Perren Street, Kentish Town, N.W.
Walker, Jas., & Co., 11, Bishop Court, Anderston, Glasgow.

ASH BAGS—
Speedings Ltd., Sail Works, Sunderland.

ASH BINS—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.
Hingley & Lamb, Ltd., Stour Works, Lye, Worcs.

ASH DISCHARGING APPLIANCES—
Mactaggart, Scott & Co., Ld., Loanhead, Edinburgh.
Trewent & Proctor, F. J., Ltd., 43, Billiter Buildings, E.C.

AWNINGS—
Speedings Ltd., Sail Works, Sunderland.

BARROWS—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.

BARROWS (Cargo)—
Edina Manufacturing Co., 19b, Broad Wynd, Leith.

BEDDING & NAPERY—
Stewart, Archibald & Co., 40-48, Union Street, [Glasgow.

BEMAL CONDENSER TUBES—
Yorkshire Copper Works, Ltd., Leeds.

"BITUMASTIC" ENAMEL MANUFACTURERS—
Wailes Dove Bitumastic Ltd., 5, St. Nicholas Buildings, Newcastle-on-Tyne.

BLINDS—
Laycock, W. S., Ltd., Victoria Works, Millhouses, Sheffield.

BLOCKS—
Bullivant & Co., Ltd., 72, Mark Lane, London, E.C.
Higginson & Co., 7, Hurst Street, Liverpool.

BLOWERS—
Allen, W. H., Son & Co., Ltd., Queen's Engineering Works, Bedford.
Davidson & Co., Ltd., Sirocco Engineering Works, [Belfast.
Keith, James, & Blackman Co., Ltd., 27, Farringdon Avenue, London, E.C.

BOATS—
Crichton, J., & Co., Saltney Shipyard, Chester.
Leitch, John, & Co., The Ferry, Renfrew, Scotland.

BOILERS—
Central Marine Engine Works, West Hartlepool.
Elliot & Jeffery, East Dock, Cardiff.
Harris Bros., Ltd., Cambrian Dry Docks, Swansea.
Hawthorn, R. & W., Leslie & Co., Ltd., St. Peter's, Newcastle-on-Tyne.
Howden, James, & Co., Ltd., Scotland St., Glasgow.
Perman & Co., Ltd., 82-83, Fenchurch Street, E.C.
Wallsend Slipway & Engineering Co., Ltd., Wallsend-on-Tyne.
White, J. Samuel, & Co., East Cowes, I.W.

BOILER CIRCULATORS—
Beresford Eng'n'ring Co., Beresford Lane, Cardiff.

BOILER CLEANER—
Jones, Fredk., & Co., Ltd., Perren Street, Kentish Town, N.W.

BOILER COMPOSITION—
Jones, Fredk., & Co., Ltd., Perren Street, Kentish Town, N.W.

BOILER COVERING—
Jones, Fredk., & Co., Ltd., Perren Street, Kentish Town, N.W.
Walker, Jas., & Co., 11, Bishop Court, Anderston, Glasgow.

BOILER MOUNTINGS—
Cockburns Ltd., Cardonald, Nr Glasgow.
McRobie, John, & Sons, 94, Elliott Street, Cranstonhill, Glasgow.
Royles Ltd., Irlam, Nr. Manchester.

BOILER PLATES (Steel)—
Leeds Forge Co., Ltd., Leeds.
Spencer, John, & Sons, Ltd., Newburn-on-Tyne.
Stewarts & Lloyds, Ltd., 41, Oswald St., Glasgow.

BOILER PRESERVATIVE—
Atlas Preservative Co., Ltd., Deptford, S.E.

BOILER TUBES—
Yorkshire Copper Works, Ltd., Leeds.

BOLTS AND NUTS—
Coventry Chain Co., Ltd., Coventry.

BORING MACHINES—
Campbells & Hunter, Ltd., Dolphin Foundry, Leeds.
Greenwood & Batley, Ltd., Albion Works, Leeds.

BRASS & COPPER FITTINGS—
McRobie, John, & Sons, 94, Elliott Street, Cranstonhill, Glasgow.

BRASS & COPPER RODS—
Delta Metal Co., Delta Works, East Greenwich, S.E.

BRASS FOUNDERS—
Billington & Newton, Ltd., Longport, Staffs.
Chambers, John, Ltd., Lowestoft.
Low, Archibald, & Sons, Ltd., 78, Merkland Street, Partick, Glasgow.
McGeoch, Wm., & Co., Ltd., 28, West Campbell [Street, Glasgow.
McRobie, John, & Sons, 94, Elliott Street, Cranstonhill, Glasgow.
Williams, Wm., Alexandra Brass Foundry, Cardiff.

BRASS NAME-PLATES—
Metograph Co., 280, Cathedral Street, Glasgow.
Rennie & Co., North Greenhill Road, Paisley.

BRASS TUBES—
Yorkshire Copper Works, Ltd., Leeds.

BRASSWORK—
Laycock, W. S., Ltd., Victoria Works, Millhouses, Sheffield.

BRONZE (Manganese)—
Billington & Newton, Ltd., Longport, Staffs.
Bowran, Robt., & Co., Ltd., 4, St. Nicholas Buildings, Newcastle-on-Tyne.
Callender's Cable & Construction Co., Ltd., Belvedere, Kent.
Delta Metal Co., Ld., E. Greenwich, London, S.E.
Stone, J., & Co., Ltd., Deptford, London, S.E.

BRIGHT STEEL—
Stonehouse Works Co., Ltd., Houghton Street, West Bromwich.

BUCKETS—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.
Hingley & Lamb, Ltd., Stour Works, Lye, Worcs.

BULKHEADS (Patent)—
Hogg-Carr Construction Co., Ltd., Newcastle-on-Tyne.

BUNTING—
Riley, Edward, & Co., Leeds.

BUOYANT DECK SEATS—
Crichton, C. & H., Ltd., Huskisson Engine Works, [Liverpool.
Linkleter's Patent Ship Fittings Co., Hudson Street, North Shields.

BUOYS—
Crichton, C. & H., Ltd., Huskisson Engine Works, Liverpool.
Hingley & Sons, Ltd., Netherton Iron Works, Dudley, Staffs.

CABINET MAKERS—
Stewart, Archibald & Co., 40-48, Union Street, Glasgow.

CABLES (Chains)—
Byers, W. L., & Co., Ltd., Tavistock House, Sunderland.
Hingley & Sons, Ltd., Netherton Iron Works, Dudley, Staffs.
Sykes, Richard, & Son, Ltd., Cradley Heath.
Taylor, Samuel, & Sons (Brierley Hill), Ltd., Brierley Hill, Staffs.
Wright, Joseph, & Co., Ltd., Tipton, Staffs.

CAISSONS & DOCK GATES—
Swan, Hunter, & Wigham Richardson, Ltd., Wallsend-on-Tyne.

CALORIFIERS—
Low, Archibald, & Sons, Ltd., 78, Merkland Street, Partick, Glasgow.
Royles Ltd., Irlam, Nr. Manchester.

CAPSTANS (Electric)—
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Mactaggart, Scott & Co., Ld., Loanhead, Edinburgh.
Stothert & Pitt, Ltd., Bath.

CARGO BLOCKS—
Higginson & Co., 7, Hurst Street, Liverpool.

CARPETS—
Stewart, Archibald & Co., 40-48, Union St., Glasgow.

CASE HARDENING BOXES—
Else, John, & Son, Ltd., 48, Muntz St., Birmingham

CASE HARDENING COMPOSITION—
Else, John, & Son, Ltd., 48, Muntz St., Birmingham

CASE HARDENING OIL—
Else, John, & Son, Ltd., 48, Muntz St., Birmingham

CAST BRASS PLATES—
Brown, Robert, & Co., 12, Espedair St., Paisley.

CASTINGS (Steel)—
Brown, John, & Co., Atlas Works, Sheffield, and Clydebank, Nr. Glasgow.
Darlington Forge Co., Ltd., Darlington.
Spencer, John, & Sons, Ltd., Newburn-on-Tyne.
Stewarts & Lloyd's, Ltd., 41, Oswald St., Glasgow.

CASTINGS (Steel, Iron and Brass)—
Chambers, John, Ltd., Lowestoft.
Darlington Forge Co., Ltd., Darlington.
Hamilton, A., & Sons, 13, Bute Crescent, Docks, Cardiff.
McRobie, John, & Sons, 94, Elliott Street, Cranstonhill, Glasgow.

CEMENT—
Aberthaw & Bristol Channel Portland Cement Co., Ltd., Merthyr House, Cardiff.

CHAINS—
"Coventry" Chain Co., Ltd., Spon End Works, Coventry.

COAL—
Beynon, T., & Co., Ltd., Merthyr House, Cardiff.
Britannic Merthyr Coal Co., Ltd., Cambrian Bldgs., Cardiff.
Cambrian Collieries, Ltd., Cambrian Bldgs., Cardiff.
Davis, D., & Sons, Ltd., Cymric Bldgs., Cardiff.
Ebbw Vale Steel, Iron & Coal Co., Ltd., Merthyr House, Cardiff.
Fernhill Collieries, Ltd., Merthyr House, Cardiff.
Glamorgan Coal Co., Ltd., Cambrian Bldgs., Cardiff.
Harrisons (London), Ltd., 66, Mark Lane, E.C.
Naval Colliery Co. (1897), Ltd., Cambrian Bldgs., Cardiff.
Newport Abercarn Black Vein Steam Coal Co., Ltd., Merthyr House, Cardiff.
Powell Duffryn Steam Coal Co., Ltd., Cardiff.
Rhymney Iron Co., Ltd., Merthyr House, Docks, Cardiff.

COMPASSES (Ship)—
Chadburn's (Ship) Telegraph Co., Ltd., Cyprus Road, Bootle, Lancs.

CONDENSERS—
Bellis & Morcom, Ltd., Birmingham.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Dawson & Downie, Elgin Works, Clydebank.
Richardsons, Westgarth & Co., Ltd., Hartlepool.
Royles, Ltd., Irlam, Nr. Manchester.
Weir, G. & J., Ltd., Cathcart, Glasgow.
White, J. Samuel, & Co., Ltd., East Cowes, I.W.

CONDENSER TUBES (Brass and Copper)—
Yorkshire Copper Works, Ltd., Leeds.

CONTROLLERS & CONTROL GEAR—
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Holmes, J. H., & Co., Portland Road, Newcastle-[on-Tyne.
Reyrolle, A., & Co., Ltd., Hebburn-on-Tyne.

CONVEYORS—
Mather & Platt, Ltd., Manchester.

COOKING APPARATUS—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.
Grieve, T., & Sons, Bedford Street, North Shields.

COPPER PIPES—
Yorkshire Copper Works, Ltd., Leeds.

COPPERSMITHS—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.
Chambers, John, Ltd., Lowestoft.
Low, Archibald, & Sons, Ltd., 78, Merkland Street, Partick, Glasgow.
Royles Ltd., Irlam, Nr. Manchester.

COPPER TUBES—
Yorkshire Copper Works, Ltd., Leeds.

CORK INSULATION—
Jones, Fredk., & Co., Ltd., Perren Street, Kentish Town, N.W.
Newalls Insulation Co., 31, Mosley Street, [Newcastle-on-Tyne.

CORRUGATED IRON—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.

COUNTER (Engine)—
Chadburn's (Ship) Telegraph Co., Ltd., Cyprus Road, Bootle, Lancs.

CRAB WINCHES—
Bullivant & Co., Ltd., 72, Mark Lane, London, E.C.

CRANES—
Ransomes & Rapier, Ltd., 32, Victoria St., S.W.
Stothert & Pitt, Ltd., Bath.

CYLINDERS (Copper)—
Yorkshire Copper Works, Ltd., Leeds.

DELTA METAL—
Delta Metal Co., Delta Works, East Greenwich, S.E.

DERRICKS & DAVITS—
Howden, James, & Co., Ltd., 95, Scotland Street, Glasgow.
Stewarts & Lloyds, Ltd., 41, Oswald St., Glasgow.

DISTILLING APPARATUS—
Royles Ltd., Irlam, Nr. Manchester.

DIVING APPARATUS—
Heinke, C. E., & Co., 88, 89, Grange Road, Bermondsey, S.E.
Mining Engineering Co., Ltd., Meco Works, Moorfields, Sheffield.

DOCK & SHIP LIGHTING—
Carbic Ltd., 51, Holborn Viaduct, London, E.C.

DOCK GATES—
Chalmers, Wm., & Co., Ltd., Rutherglen, Nr. Glasgow.
Hamilton, Wm., & Co., Ltd., Port Glasgow, Scotland.
Swan, Hunter & Wigham Richardson, Ltd., Wallsend-on-Tyne.

DOORS (Watertight)—
British Thomson-Houston Co., Ltd., Rugby.
Stone, J., & Co., Ltd., Deptford, S.E.

BUYERS' GUIDE—*continued.*

DREDGE PLANTS—
[illegible] Wm., & Co., Ltd., Rutherglen, Nr. Glasgow.
[illegible]

DREDGING
[illegible] Dredging Co., Ltd., Queen [illegible] Westminster, London, S.W.

DRILLING MACHINES—
[illegible]

DRILLS
[illegible]

DRILLS (Pneumatic and Electric)
[illegible]

DRY FITTINGS (Laundry)
[illegible]

DYNAMOS
[illegible]
Holmes, J. H., & Co., Portland Road, Newcastle-on-Tyne.

ELECTRIC CRANES—
[illegible]
[illegible], Ltd., 2, Victoria Street, London, S.W.
[illegible]

ELECTRIC DERRICKS—
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.

ELECTRIC DYNAMOS & MOTORS—
Boothroyd, H. T., Ltd., Bootle, Liverpool.
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Greenwood & Batley, Ltd., Albion Works, Leeds.
Holmes, J. H., & Co., Portland Road, Newcastle-on-Tyne.
Mather & Platt, Ltd., Manchester.
Sunderland Forge & Engineering Co., Ltd., Sunderland.

ELECTRIC FITTINGS—
[illegible] Co., [illegible], Sheffield.

ELECTRIC HEATING & COOKING APPARATUS
British Thomson-Houston Co., Ltd., Rugby.
McGeoch, Wm., & Co., Ltd., 28, West Campbell Street, Glasgow.

ELECTRIC LAMPS—
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
McGeoch, Wm., & Co., Ltd., 28, West Campbell Street, Glasgow.

ELECTRIC LIGHTING—
Boothroyd, H. T., Ltd., Bootle, Liverpool.
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Holmes, J. H., & Co., Portland Road, Newcastle-on-Tyne.
Mather & Platt, Ltd., Manchester.
Sunderland Forge & Engineering Co., Ltd., Sunderland.

ELECTRIC-LIGHTING PLANT—
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Greenwood & Batley, Ltd., Albion Works, Leeds.
Holmes, J. H., & Co., Portland Road, Newcastle-on-Tyne.
Mather & Platt. Ltd., Manchester.
Sunderland Forge & Engineering Co., Ltd., Sunderland.

ELECTRIC MOTORS—
Boothroyd, H. T., Ltd., Bootle, Liverpool.
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Greenwood & Batley, Ltd., Albion Works, Leeds.
Holmes, J. H., & Co., Portland Road, Newcastle-on-Tyne.
Mather & Platt, Ltd., Manchester.
Sunderland Forge & Engineering Co., Ltd., Sunderland.

ELECTRIC WIRES—
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.

ELECTRICAL CONTRACTORS—
Holmes, J. H., & Co., Portland Road, Newcastle-on-Tyne.
Low, Archibald, & Sons, Ltd., 78, Merkland Street, Partick, Glasgow.
McGeoch, Wm., & Co., Ltd., 28, West Campbell Street, Glasgow.
Mather & Platt, Ltd., Manchester.
Sunderland Forge & Engineering Co., Ltd., Sunderland.

ELECTRICAL ENGINEERS—
Boothroyd, H. T., Ltd., Bootle, Liverpool.
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Chadburn's (Ship) Telegraph Co., Ltd., Cyprus Road, Bootle, Lancs.
Graham, Alfred, & Co., St. Andrew's Works, Crofton Park, [illegible] S.E.
Holmes, J. H., & Co., Portland Road, Newcastle-on-Tyne.
Mather & Platt, Ltd., Manchester.
Reyrolle, A., & Co., Ltd., Hebburn-on-Tyne.
Sunderland Forge & Engineering Co., Ltd., Sunderland.

ELECTRICAL INSTRUMENTS (Ammeters)
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Holmes, J. H., & Co., Portland Road, Newcastle-on-Tyne.

ELECTRICAL INSTRUMENTS (Circuit Breakers)
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Holmes, J. H., & Co., Portland Road, Newcastle-on-Tyne.
Reyrolle, A. & Co., Ltd., Hebburn-on-Tyne.

ELECTRICAL INSTRUMENTS (Relays)—
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Holmes, J. H., & Co., Portland Road, Newcastle-on-Tyne.
Reyrolle, A., & Co., Ltd., Hebburn-on-Tyne.

ELECTRICAL INSTRUMENTS (Voltmeters)—
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Holmes, J. H., & Co., Portland Road, Newcastle-on-Tyne.

EMERY WHEELS—
Sterne, L., & Co., Ltd., Crown Iron Works, Glasgow.

ENAMEL MANUFACTURERS—
[illegible], Ltd., Newcastle-on-Tyne.
Wailes Dove Bitumastic, Ltd., 5, St. Nicholas Buildings, Newcastle-on-Tyne.
Websters Ltd., Hull.

ENGINE (Electric Light)—
Belliss & Morcom, Ltd., Birmingham.
Greenwood & Batley, Ltd., Albion Works, Leeds.

ENGINES (Land)—
Chambers, John, Ltd., Lowestoft.

ENGINES (Marine)—
Allen, W. H., Son & Co., Ltd., Queen's Engineering Works, Bedford.
Central Marine Engine Works, West Hartlepool.
Chambers, John, Ltd., Lowestoft.
Hawthorn, R. & W., Leslie & Co., Ltd., St. Peter's, Newcastle-on-Tyne.
Howden, James, & Co., Ltd., Scotland St., Glasgow.
Perman & Co., Ltd., 82-83, Fenchurch Street, E.C.
White, J. Samuel, & Co., Ltd., East Cowes, I.W.

ENGINE & DECK STORES—
McGeoch, Wm., & Co., Ltd., 28, West Campbell Street, Glasgow.
Metallic Valve Co., Colonial House, Water Street, Liverpool.

ENGINE AUXILIARIES—
Aspinall's Patent Governor Co., 7, Strand Street, Liverpool.

ENGINE FITTINGS—
Aspinall's Patent Governor Co., 7, Strand Street, Liverpool.
McRobie, John, & Sons, 94, Elliott Street, Cranstonhill, Glasgow.

ENGINE-ROOM OUTFITS—
Grieve, T., & Sons, Bedford Street, North Shields.
Newalls Insulation Co., 31, Mosley Street, Newcastle-on-Tyne.

ENGRAVERS—
Brown, Robert, & Co., 12, Espedair St., Paisley.

EVAPORATORS—
Central Marine Engine Works, West Hartlepool.
Richardsons, Westgarth & Co., Ltd., Hartlepool.
Royles, Ltd., Irlam, Nr. Manchester.
Weir, G. & J., Ltd., Cathcart, Glasgow.

EXTRUDED METALS (Brass, Bronze, Copper, Delta Metals)—
Delta Metal Co., Ltd., E. Greenwich, London, S.E.

FANS—
Adam, J. M., & Co., Greenfield Iron Works, Dalmarnock, Glasgow.
Allen, W. H., Son & Co., Ltd., Queen's Engineering Works, Bedford.
Boothroyd, H. T., Ltd., Bootle, Liverpool.
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg., Co., Ltd., Trafford Park, Manchester.
Davidson & Co., Ltd., Sirocco Engineering Works, Belfast.
Hogan & Wardrop, 2, Gresham Buildings, Basinghall Street, London, E.C.
Keith, James, & Blackman Co., Ltd., 27, Farringdon Avenue, London, E.C.

FEED-WATER HEATERS—
Beresford Eng'n'ring Co., Beresford Lane, Cardiff.
Central Marine Engine Works, West Hartlepool.
Richardsons, Westgarth & Co., Ltd., Hartlepool.
Royles, Ltd., Irlam, Nr. Manchester.
Weir, G. & J., Ltd., Cathcart, Glasgow.

FILES—
Brown, John, & Co., Atlas Works, Sheffield.
Spencer, John, & Sons, Ltd., Newburn-on-Tyne.

FILTERS (Marine)—
Central Marine Engine Works, West Hartlepool.
Chambers, John, Ltd., Lowestoft.
Cockburns, Ltd., Cardonald, Nr. Glasgow.
Mather & Platt, Ltd., Manchester.

FIREBARS—
Liverpool Patents Co., Ltd., Derby Square, James Street, Liverpool.

FIRE EXTINGUISHERS—
Low, Archibald, & Sons, Ltd., 78, Merkland Street, Partick, Glasgow.
Mather & Platt, Ltd., Manchester.

FIRE-FIGHTING APPLIANCES—
Mining Engineering Co., Ltd., Meco Works, Sheffield.

FLAGS—
Riley, Edward, & Co., Leeds.
Speedings, Ltd., Sail Works, Sunderland.

FLOATING DOCKS—
Chalmers, Wm., & Co., Ltd., Rutherglen, Nr. Glasgow, Scotland.
Hamilton, Wm., & Co., Ltd., Port Glasgow.
Swan, Hunter & Wigham Richardson, Ltd., Wallsend-on-Tyne.

FLOOR COVERING—
Docker Bros., Ltd., Metropolitan Road, Saltley, Birmingham.

FORCED DRAUGHT—
Adam, J. M., & Co., Greenfield Iron Works, Dalmarnock, Glasgow.
Davidson & Co., Ltd., Sirocco Engineering Works, Belfast.
Howden, J., & Co., Ltd., Scotland Street, Glasgow.
Keith, James, & Blackman Co., Ltd., 27, Farringdon Avenue, London, E.C.

FORGING PRESSES—
Berry, Henry, & Co., Ltd., Croydon Works, Leeds.
Mactaggart, Scott & Co., Ltd., Loanhead, Edinburgh.

FORGINGS—
Brown, John & Co., Ltd., Atlas Works, Sheffield.
Darlington Forge Co., Ltd., Darlington.
Hingley & Sons, Ltd., Netherton Iron Works, Staffs.
Sunderland Forge & Engineering Co., Ltd., Sunderland.

FORGINGS (Bronze)—
Delta Metal Co., Delta Works, East Greenwich, London, S.E.

FORGINGS (Steel)—
Brown, John, & Co., Ltd., Atlas Works, Sheffield.
Darlington Forge Co., Ltd., Darlington.
Spencer, John, & Sons, Ltd., Newburn-on-Tyne.

FUMIGATORS—
Low, Archibald, & Sons, Ltd., 78, Merkland Street, Partick, Glasgow.

FURNACE BRIDGES—
Hamilton, A., & Sons, 13, Bute Crescent, Docks, Cardiff.
McConwell, A., & Co., Ltd., 60, Drury Buildings, Water Street, Liverpool.

FURNACES—
Brown, John, & Co., Ltd., Atlas Works, Sheffield.
Deighton's Patent Flue & Tube Co., Ltd., Vulcan Works, Pepper Road, Leeds.
Leeds Forge Co., Ltd., Leeds.
Piggott, T., & Co., Ltd., Birmingham.

FUSES—
Reyrolle, A., & Co., Ltd., Hebburn-on-Tyne.

GALLEY GEAR—
Grieve, T., & Sons, Bedford Street, North Shields.

GALVANIZERS—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.

GAS ENGINES—
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Mather & Platt, Ltd., Manchester.

GAUGES—
Chatwin, Thos., Ltd., Gt. Tindal St., Birmingham.

GEAR CUTTING—
Campbells & Hunter, Ltd., Dolphin Foundry, Leeds.

GEARING—
Campbells & Hunter, Ltd., Dolphin Foundry, Leeds

GEARS—
Spencer, John, & Sons, Ltd., Newburn-on-Tyne.

GEARS (Noiseless or Silent)—
British Thomson-Houston Co., Ltd., Rugby.
Brown, David, & Sons (Hfd.), Ltd., Huddersfield.

GOVERNORS—
Aspinall's Patent Governor Co., 7, Strand Street, Liverpool.

GRINDING MACHINES
Greenwood & Batley, Ltd., Albion Works, Leeds.

GRINDING WHEEL MACHINES—
Sterne, L., & Co., Ltd., Crown Iron Works, Glasgow

HATCH COVERS (Patent)—
Hogg-Carr Construction Co., Ltd., Newcastle-on-Tyne.

HEATING APPARATUS—
Ashwell & Nesbit, Ltd., Barkby Lane, Leicester.
Royles, Ltd., Irlam, Nr. Manchester.
Saunders & Taylor, Ltd., 43, Lower Mosley Street, Manchester.

HEATING ENGINEERS—
Ashwell & Nesbit, Ltd., Barkby Lane, Leicester.
Low, Archibald, & Sons, Ltd., 78, Merkland Street, Partick, Glasgow.
Royles, Ltd., Irlam, Nr. Manchester.
Saunders & Taylor, Ltd., 43, Lower Mosley Street, Manchester.

HELM SIGNAL TELEMOTORS—
Mactaggart, Scott & Co., Ld., Loanhead, Edinburgh.

HIGH SPEED DRILLS—
Brown, John, & Co., Atlas Works, Sheffield.

HIGH SPEED STEEL—
Brown, John, & Co., Atlas Works, Sheffield.

HOISTS—
Mather & Platt, Ltd., Manchester.
Stothert & Pitt, Ltd., Bath.
Waygood-Otis, Ltd., Falmouth Road, S.E.

BUYERS' GUIDE—*continued.*

HOSE—
Heinke, C. E., & Co., 88, 89, Grange Road, Bermondsey, London, S.E.

HYDRAULIC CRANES—
Berry, Henry, & Co., Ltd., Croydon Works, Leeds.
Brown Brothers & Co., Ltd., Rosebank Iron Works, Edinburgh.
Mactaggart, Scott & Co., Ld., Loanhead, Edinburgh

HYDRAULIC MACHINERY—
Armstrong, Sir W. G., Whitworth & Co., Ltd., Elswick Works, Newcastle-upon-Tyne.
Berry, Henry, & Co., Ltd., Croydon Works, Leeds.
Waygood-Otis, Ltd., Falmouth Road, S.E.

HYDRANTS—
McRobie, John, & Sons, 94, Elliott Street, Cranstonhill, Glasgow.

INDIARUBBER—
Heinke, C. E., & Co., 88, 89, Grange Road, Bermondsey, London S.E.

INDICATORS—
Robinson, A., & Co., Ltd., Bootle, Liverpool.

INDUCED DRAUGHT—
Davidson & Co., Ld., Sirocco Eng'n'g W'rks, Belfast
Keith, James, & Blackman Co., Ltd., 27, Farringdon Avenue, London, E.C.

INSULATIONS—
Jones, Fredk., & Co., Ltd., Perren Street, Kentish Town, N.W. [Liverpool.
Liverpool Refrigeration Co., Ltd., Colonial House,

IRON ROOFS AND BUILDINGS—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.

JOINTING MATERIAL (Manganesite)—
Hudson & Co.'s Successors, John, 15, Victoria Warehouses, Mansell Street, E.C.

LAMPS AND LIGHTS—
Grieve, T., & Sons, Bedford Street, North Shields.
Kaye, Joseph, & Sons, Ltd., Leeds.

LAUNCHES—
Chambers, John, Ltd., Lowestoft.
Crichton, J., & Co., Saltney Shipyard, Chester.
Leitch, John, & Co., The Ferry, Renfrew, Scotland.
Livingstone & Cooper, Ltd., Hessle, Hull.
MacLaren Bros., Ltd., Dumbarton.
Perman & Co., Ltd., 82-83, Fenchurch St., E.C.
Seamless Steel Boat Co., Ltd., Wakefield.
Thornycroft, John I., & Co., Ltd., Caxton House, Westminster, London, S.W.
Watson, J. S., Gainsborough.
White, J. Samuel, & Co., Ltd., East Cowes, I.W.

LAUNDRY MACHINERY—
Bradford, T., & Co., Salford, Manchester.

LAVATORY FITTINGS AND APPLIANCES—
Levick, John, Alma Street, Aston, Birmingham.

LEAD (Sheets and Pipes)—
Rimer Bros., Newcastle-on-Tyne.

LEAD (White and Red)—
Rimer Bros., Newcastle-on-Tyne.

LIFEBELTS AND BUOYS—
Speedings Ltd., Sail Works, Sunderland.

LIFTS (Window)—
Laycock, W. S., Ltd., Victoria Works, Millhouses, Sheffield.

LIFTS AND HOISTS—
Mactaggart, Scott & Co., Ld., Loanhead, Edinburgh
Waygood-Otis, Ltd., Falmouth Road, S.E.

LIGHTERAGE—
Alexander, W. H. J., St. John's Wharf, Wapping, E.

LIGHTERS—
Chalmers, Wm., & Co., Ltd., Rutherglen, Nr. Glasgow.
Crichton, J., & Co., Saltney Shipyard, Chester.
Watson, J. S., Gainsborough.

LIMEWASHING & DISINFECTING MACHINES—
Stonehouse Work Co., Ltd., Houghton Street, West Bromwich.

LOCKS—
Kaye, Joseph, & Sons, Ltd., Leeds.

LOCOMOTIVE TUBES (Copper & Brass)—
Yorkshire Copper Works, Ltd., Leeds.

LUBRICATORS— [Cranstonhill, Glasgow.
McRobie, John, & Sons, 94, Elliott Street,

MACHINE TOOLS—
Campbells & Hunter, Ld., Dolphin Foundry, Leeds.
Greenwood & Batley, Ltd., Albion Works, Leeds.
Scriven & Co., Leeds Old Foundry, Leeds.

MACHINERY NAME PLATES—
Brown, Robert, & Co., 12, Espedair St., Paisley.

MAGNESIA—
Jones, Fredk., & Co., Ltd., Perren Street, Kentish Town, N.W.

MARINE ENGINEERS—
Bailey, C. H., Newport, Mon. Barry Docks.
Barry Graving Dock & Engineering Co., Ltd.,
Brown, John, & Co., Ltd., Clydebank, Nr. Glasgow.
Chambers, John, Ltd., Lowestoft.
Crichton, C. & H., Ltd., Huskisson Engine Works, Liverpool. [Southampton.
Day, Summers & Co., Ltd., Northam Ironworks,
Delegación de la Compañia Trasatlantica, Cadiz.
Diamond, Thos., & Co., Cardiff.
Doxford, Wm., & Sons, Ltd., Sunderland.
Elliott & Jeffery, East Dock, Cardiff.
Gray, Wm., & Co., Ltd., West Hartlepool.
Harland & Wolff, Ltd., Belfast.
Harris Bros., Ltd., Cambrian Dry Docks, Swansea.
Hawthorn, R. & W., Leslie & Co., Ltd., Hebburn-on-Tyne.
Hill's Dry Docks & Engineering Co., Ltd., Cardiff.

MARINE ENGINEERS *(contd).*—
Livingstone & Cooper, Ltd., Hessle, Hull.
Mountstuart Dry Docks, Ltd., Cardiff.
Perman & Co., Ltd., 82-83, Fenchurch St., E.C.
Richardsons, Westgarth & Co., Ltd., Hartlepool, Middlesbrough and Sunderland.
Shearman, John, & Co., Ltd., Cardiff.
Simons, Wm., & Co., Ltd., Renfrew, Nr. Scotland.
Stephen, Alex., & Sons, Ltd., Linthouse, Govan, Glasgow.
Swan, Hunter, & Wigham Richardson, Ltd., Wallsend-on-Tyne. [Westminster, S.W.
Thornycroft, John I., & Co., Ltd., Caxton House,
Wallsend Slipway & Engineering Co., Ltd., Wallsend-on-Tyne.
White, J. Samuel, & Co., Ltd., East Cowes, I.W.
Workman Clark & Co., Ltd., Belfast.
Yarrow & Co., Ltd., Glasgow.

MARINE GOVERNORS—
Aspinall's Patent Governor Co., 7, Strand Street, Liverpool.

MARKING-OFF TABLES—
Campbells & Hunter, Ltd., Dolphin Foundry, Leeds.

MATTRESSES—
Stewart, Archibald, & Co., 40-48, Union St., Glasgow

METALLIC PACKING—
Beldam Packing & Rubber Co., Ltd., 1 and 2, Gracechurch Street, London, E.C.
McConnell, A., & Co., Ltd., 60, Drury Buildings, Water Street, Liverpool.
United States Metallic Packing Co., Ltd., Bradford

METAL SPINNINGS—
Levick, John, Alma Street, Aston, Birmingham.

METALS (Patent)—
Bowran, Robt., & Co., Ltd., Newcastle-on-Tyne.
Delta Metal Co., Ltd., Delta Works, East Greenwich.

MOTOR BOATS—
Chambers, John, Ltd., Lowestoft.
Crichton, J., & Co., Saltney Shipyard, Chester.
Leitch, John, & Co., The Ferry, Renfrew, Scotland.
Livingstone & Cooper, Ltd., Hessle, Hull.
MacLaren Bros., Ltd., Dumbarton.
Perman & Co., Ltd., 82-83, Fenchurch St., E.C.
Seamless Steel Boat Co., Ltd., Wakefield.
Thornycroft, John I., & Co., Ltd., Caxton House, Westminster, London, S.W.
White, J. Samuel, & Co., Ltd., East Cowes, I.W.

MOTOR STARTING AND CONTROL GEAR— [on-Tyne.
Holmes, J. H., & Co., Portland Road, Newcastle-
Reyrolle, A., & Co., Ltd., Hebburn-on-Tyne.

NAVAL ARCHITECTS' SUPPLIES—
Walker, Jas., & Co., 11, Bishop Court, Anderston, Glasgow.

OIL CANS—
Kaye, Joseph, & Sons, Ltd., Leeds.

OIL ECONOMISERS—
Kaye, Joseph, & Sons, Ltd., Leeds.

OIL ENGINES—
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Edina Manufacturing Co., 19h, Broad Wynd, Leith.
Perman & Co., Ltd., 82-83, Fenchurch Street, E.C.
Swan, Hunter & Wigham Richardson, Ltd., Wallsend-on-Tyne.
Thornycroft, John I., & Co., Ltd., Caxton House, Westminster, S.W.
White, J. Samuel, & Co., Ltd., East Cowes, I.W.

OIL-FUEL INSTALLATION—
Wallsend Slipway & Engineering Co., Ltd., Wallsend-on-Tyne.
White, J. Samuel, & Co., Ltd., East Cowes, I.W.

OIL IMPORTERS & BLENDERS—
Rimer Bros., Newcastle-on-Tyne.

PACKING (Engine)—
Beldam Packing & Rubber Co., Ltd., 1 and 2, Gracechurch Street, London, E.C.
Walker, Jas., & Co., Ltd., Lion Works, Garford Street, West India Dock Road, E.

PAINTS—
Briggs, W., & Sons, Ltd., Dundee.
Cocks, Harry, & Co., Cardiff.
Hamilton, Archd., & Co., Possilpark, Glasgow.
Hoyle, Robson, Barnett, & Co., Ltd., St. Nicholas Chambers, Newcastle-on-Tyne.
Wailes Dove Bitumastic Ltd., 5, St. Nicholas Buildings, Newcastle-on-Tyne.
Websters Ltd., Hull.

PANELLING—
Stewart, Archibald, & Co., 40-48, Union St., Glasgow

PATENT HAWSE PIPE AND DECK FLANGE—
Hamilton, A., & Sons, 13, Bute Crescent, Docks, Cardiff.

PERFORATED METALS—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.
Piggott, T., & Co., Ltd., Birmingham.

PIPES—
Stewarts & Lloyds, Ltd., 41, Oswald St., Glasgow.
Yorkshire Copper Works, Ltd., Leeds.

PLANING MACHINES for Plate Edges—
Scriven & Co., Leeds Old Foundry, Leeds.

PLATE BENDING ROLLS—
Scriven & Co., Leeds Old Foundry, Leeds.

PORCELAIN ENAMELLED CAST IRON—
Levick, John, Alma Street, Aston, Birmingham.

PROPELLERS—
Billington & Newton, Ltd., Longport, Staffs.
Chambers, John, Ltd., Lowestoft. [Liverpool.
Crichton, C. & H., Ltd., Huskisson Engine Works.
Darlington Forge Co., Ltd., Darlington.
Spencer, John, & Sons, Ltd., Newburn-on-Tyne.

PROPELLER BLADES—
Billington & Newton, Ltd., Longport, Staffs.
Darlington Forge Co., Ltd., Darlington.
Stewarts & Lloyds, Ltd., 41, Oswald St., Glasgow.

PUBLICATIONS—
"Shipbuilding and Shipping Record," Queen Anne's Chambers, Westminster, London, S.W.

PULLEY BLOCKS—
Bullivant & Co., Ltd., 72, Mark Lane, London, E.C.
Higginson & Co., 7, Hurst Street, Liverpool.
Loveridge, Ltd., Cardiff.
Wright, Joseph, & Co., Ltd., Tipton, Staffs.

PUMPS—
Allen, W. H., Son & Co., Ltd., Queen's Engineering Works, Bedford.
Beresford Eng'n'ring Co., Beresford Lane, Cardiff.
Berry, Henry, & Co., Ltd., Croydon Works, Leeds.
Central Marine Engine Works, West Hartlepool.
Davey & Co. (London), Ltd., 88, West India Dock Road, E.
Dawson & Downie, Elgin Works, Clydebank.
Edina Manufacturing Co., 19h, Broad Wynd, Leith.
Hall, J. P., & Sons, Ltd., Peterborough.
Mather & Platt, Ltd., Manchester.
Weir, G. & J., Ltd., Cathcart, Glasgow.

PUNCHING AND SHEARING MACHINES—
Scriven & Co., Leeds Old Foundry, Leeds.

RADIATORS—
British Thomson-Houston, Co., Ltd., Rugby.
Low, Archibald, & Sons, Ltd., 7, Meikland Street, Partick, Glasgow.
Royles Ltd., Irlam, Nr. Manchester.

RADIATOR TUBES—
Yorkshire Copper Works, Ltd., Leeds.

REAMERS—
Chatwin, Thos., Ltd., Gt. Tindal St., Birmingham.

REFRIGERATING MACHINERY—
Hall, J. & E., Ltd., Dartford Ironworks, Kent.
Liverpool Refrigeration Co., Ltd., Colonial House, Liverpool.
Sterne, L. & Co., Ltd., Crown Ironworks, Glasgow.

RESCUE APPLIANCES—
Mining Engineering Co., Ltd., Meco Works, Moorfields, Sheffield.

REVERSING ENGINES (Direct-Acting Type)— [Works, Edinburgh.
Brown Brothers & Co., Ltd., Rosebank Iron
Mactaggart, Scott & Co., Ld., Loanhead, Edinburgh

RHEOSTATS & RESISTANCES (all kinds)—
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester. [on-Tyne.
Holmes, J. H., & Co., Portland Road, Newcastle-
Reyrolle, A. & Co., Ltd., Hebburn-on-Tyne.

ROPE-CUTTING MACHINES—
Bullivant & Co., Ltd., 72, Mark Lane, London, E.C.

ROPES (Wire)—
Bullivant & Co., Ltd., 72, Mark Lane, London, E.C.

ROUND AND OVAL HOLE CUTTING-OUT MACHINES—
Campbells & Hunter, Ltd., Dolphin Foundry, Leeds.

RUBBER GOODS—
Heinke, C. E., & Co., 88, 89, Grange Road, Bermondsey, London, S.E.

RUBBER HOSE—
Heinke, C. E., & Co., 88, 89, Grange Road, Bermondsey, London, S.E.

RUSTLESS IRON—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.

SAFE MANUFACTURERS
Whitfield's Safe & Door Co., Oxford Street, Birmingham.

SALOON LIGHTS—
Callender's Cable & Construction Co., Ltd., Belvedere, Kent.
Laycock, W. S., Ltd., Victoria Works, Millhouses, Sheffield.

SALVAGE—
Alexander, W. H. J., St. John's Wharf, Wapping, E.

SANITARY FITTINGS AND APPLIANCES—
Levick, John, Alma Street, Aston, Birmingham.

SCREWING MACHINES—
Chatwin, Thos., Ltd., Gt. Tindal St., Birmingham.

SHAFTING—
Brown, John, & Co., Ltd., Atlas Works, Sheffield.
Darlington Forge Co., Ltd., Darlington.
Spencer, John, & Sons, Ltd., Newburn-on-Tyne.

SHAPING MACHINES—
Greenwood & Batley, Ltd., Albion Works, Leeds.

SHEAVES—
Higginson & Co., 7, Hurst Street, Liverpool.

SHEERS, TRAVERSING (Land and Floating)—
Day, Summers & Co., Ltd., Northam Ironworks, Southampton.

SHIP APPLIANCES—
Linkleter's Patent Ship Fittings Co., 20, Percy Street, Tynemouth.

SHIP BROKERS—
Walford, Leopold (London) Ltd., 29, Gt. St. Helens, E.C.

SHIP BROKERS (Sale and Purchase)—
Hall, Edward, Cardiff.
Pinkney, Thos., & Sons, Sunderland.
Walford, Leopold (London) Ltd., 29, Gt. St. Helens, E.C.

BUYERS' GUIDE—*continued.*

SHIPBUILDERS—
[illegible]
Hawthorn, R. & W., Leslie & Co., Ltd., Hebburn-on-Tyne.
[illegible]
Swan, Hunter & Wigham Richardson, Ltd., Wallsend-on-Tyne.
[illegible] House, Westminster, S.W.
[illegible] I.W.
[illegible]

SHIP CONSTRUCTION—
[illegible], Newcastle-on-Tyne.
[illegible], London, E.C.
[illegible] Renfrew, Nr. Scotland.
Swan, Hunter & Wigham Richardson, Ltd.
[illegible] Shipyard, W.

SHIP FURNISHINGS & FITTINGS—
[illegible], Cardiff.
[illegible], Ltd., 58, West India Dock Road, E.
Laycock, W. S., Ltd., Victoria Works, Millhouses.
[illegible] Street, North Shields.
[illegible] Ship Fittings Co., Hudson
Loveridge, Ltd., Cardiff.
McGeoch, Wm., & Co., Ltd., [illegible], West Campbell Street, [illegible] [Liverpool.
Metallic Valve Co., Colonial House, Water Street,
Stewart, Archibald, & Co., [illegible], Union Street, Glasgow.
Waygood-Otis, Ltd., Falmouth Road, S.E.

SHIP LAVATORIES—
Stewart, Archibald, & Co., [illegible], Union St., Glasgow

SHIP PLATES (Steel)—
Spencer, John, & Sons, Ltd., Newburn-on-Tyne.
Stewarts & Lloyds, Ltd., 41, Oswald St., Glasgow

SHIP REPAIRERS—
Bailey, C. H., Newport, Mon.
Crichton, C. & H., Ltd., Huskisson Engine Works, Liverpool. [Southampton.
Day, Summers & Co., Ltd., Northam Ironworks,
[illegible], Cardiff.
[illegible], Wm., & Sons, Ltd., Sunderland.
[illegible], East Dock, Cardiff.
Gray, Wm., & Co., Ltd., West Hartlepool.
Grayson, H. & S., Ltd., Royal Liver Building, Liverpool.
Harland & Wolff, Ltd., Belfast.
[illegible] Dry Docks, Swansea.
Hawthorn, R. & W., Leslie & Co., Ltd., Hebburn-on-Tyne.
[illegible] Dry Docks & Engineering Co., Ltd., Cardiff.
Mounstuart Dry Docks, Ltd., Cardiff.
Shearman, John, & Co., Ltd., Cardiff.
Stephen, Alex., & Sons, Ltd., Linthouse, Govan, Glasgow.
Swan, Hunter, & Wigham Richardson, Ltd., Wallsend-on-Tyne.
Wallsend Slipway & Engineering Co., Ltd., Wallsend-on-Tyne.
Yarrow & Co., Ltd., Glasgow.

SHIPS' ELECTRIC FITTINGS—
McGeoch, Wm., & Co., Ltd., [illegible], West Campbell Street, Glasgow.
Reyrolle, A., & Co., Ltd., Hebburn-on-Tyne.
Sunderland Forge & Engineering Co., Ltd., Sunderland.

SHIPS' LAUNDRIES—
Bradford, T., & Co., Salford, Manchester.

SHIPS' TELEGRAPHS—
Chadburn's (Ship) Telegraph Co., Ltd., Cyprus Road, Bootle, Lancs.
Robinson, A., & Co., Ltd., Bootle, Liverpool.

SIGNAL FLASHING AND CABIN LAMPS—
McGeoch, Wm., & Co., Ltd., [illegible], West Campbell Street, Glasgow.

SILICATE-COTTON SPECIALITIES—
[illegible], Bishop Court, Anderston, [Glasgow.

SKYLIGHT & LIFTING GEARS—
Low, Archibald, & Sons, Ltd., 78, Merkland Street, Partick, Glasgow.

SLAG WOOL (Silicate Cotton)—
Jones, Fredk., & Co., Ltd., Perren Street, Kentish Town, N.W.

SLEWING GEAR (for Ships' Derricks)—
Edina Manufacturing Co., 19h, Broad Wynd, Leith.

SMITHS' HEARTHS—
Keith, James, & Blackman Co., Ltd., 27, Farringdon Avenue, London, E.C.

SOLDER—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.

SPEAKING TUBES—
Durham, Churchill & Co., Grimesthorpe, Sheffield.

SPELTER—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.

SPIRAL SPRINGS—
Cockburns Ltd., Cardonald, Nr. Glasgow.
Steven, J., & Co., Ltd., Crown Iron Works, Glasgow.

SPONGES—
[illegible] Sons, Ltd., Pindley Road, City [illegible]

STAMPINGS—
[illegible], Ltd., [illegible]

STAYBOLTS—
[illegible] & Sons, Ltd., Nechells Iron Works, [illegible]

STEAM-FITTING MANUFACTURERS—
[illegible] & Neates, Ltd., Longcroft, Staffs.
Royles Ltd., Irlam, Nr. Manchester.

STEAM-HEATING—
Low, Archibald, & Sons, Ltd., 78, Merkland Street, Partick, Glasgow.
Royles Ltd., Irlam, Nr. Manchester.

STEAM KETTLES—
Royles Ltd., Irlam, Nr. Manchester.

STEAM PIPES—
Stewarts & Lloyds, Ltd., 41, Oswald St., Glasgow.
Yorkshire Copper Works, Ltd., Leeds.

STEAM TRAPS—
Cockburns Ltd., Cardonald, Nr. Glasgow.
Royles Ltd., Irlam, Nr. Manchester.

STEAMSHIP SPECIALITIES—
Laycock, W. S., Ltd., Victoria Works, Millhouses, Sheffield. [Liverpool.
Metallic Valve Co., Colonial House, Water House,

STEEL—
Brown, John, & Co., Atlas Works, Sheffield.
Spencer, John, & Sons, Ltd., Newburn-on-Tyne.

STEEL BARGES—
Crichton, J., & Co., Saltney Shipyard, Chester.
Watson, J. S., Gainsborough.

STEEL BOATS—
Crichton, J., & Co., Saltney Shipyard, Chester.
Leitch, John, & Co., The Ferry, Renfrew, Scotland.
Seamless Steel Boat Co., Ltd., Wakefield.

STEEL MAKERS—
Brown, John, & Co., Atlas Works, Sheffield.
Darlington Forge Co., Ltd., Darlington.
Spencer, John, & Sons, Ltd., Newburn-on-Tyne.

STEEL PLATES AND SHEETS—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.
Stewarts & Lloyds, Ltd., 41, Oswald St., Glasgow.

STEERING-GEAR—
Brown Brothers & Co., Ltd., Rosebank Iron Works, Edinburgh.
Chambers, John, Ltd., Lowestoft.
Crichton, C. & H., Ltd., Huskisson Engine Works, Liverpool.
Hastie, John, & Co., Ltd., Greenock.
Higginson & Co., 7, Hurst Street, Liverpool.

STEERING GEAR (Buffers)—
Loveridge, Ltd., Cardiff.

STEERING TELEMOTORS—
Brown Brothers & Co., Ltd., Rosebank Iron Works, Edinburgh.
Mactaggart, Scott & Co., Ld., Loanhead, Edinburgh.

STOCKS AND DIES—
Chatwin, Thos., Ltd., Gt. Tindal St., Birmingham.

STORES (Ship)—
Walker, Jas., & Co., 11, Bishop Court, Anderston, Glasgow.

STRONG ROOM MANUFACTURERS—
Whitfield Safe & Door Co., Oxford St., Birmingham

STRONG ROOM DOOR MANUFACTURERS—
Whitfield Safe & Door Co., Oxford St., Birmingham

STRUCTURAL ENGINEERS—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.

SUPERHEATERS—
Central Marine Engine Works, West Hartlepool.
Superheater Corporation, Ltd., Palace Chambers, 9, Bridge Street, Westminster, S.W.

SUSPENSION BULB FURNACE—
Leeds Forge Co., Ltd., Leeds.

SWITCHBOARDS—
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Holmes, J. H., & Co., Portland Road, Newcastle-on-Tyne.
Mather & Platt, Ltd., Manchester.
McGeoch, Wm., & Co., Ltd., 28, West Campbell Street, Glasgow.
Reyrolle, A., & Co., Ltd., Hebburn-on-Tyne.
Sunderland Forge & Eng'ring Co., Ld., Sunderland.

SWITCHGEAR & INSTRUMENTS—
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Holmes, J. H., & Co., Portland Road, Newcastle-on-Tyne.
Reyrolle, A., & Co., Ltd., Hebburn-on-Tyne.

SYRENS—
McRobie, John, & Sons, 94, Elliott Street, Cranstonhill, Glasgow.

TANK TOP COVERING—
Hamilton, Archd., & Co., Possilpark, Glasgow.
Wailes Dove Bitumastic Ltd., 5, St. Nicholas Buildings, Newcastle-on-Tyne.

TANKS—
Braby, F., & Co., Ltd., Eclipse Works, Glasgow.
Mather & Platt, Ltd., Manchester.

TARPAULINS—
Speedings Ltd., Sail Works, Sunderland.

TELEPHONES—
Graham, Alfred, St. Andrew's Works, Crofton Park Road, S.E.
McGeoch, Wm., & Co., Ltd., 28, West Campbell Street, Glasgow.

TIMEPIECES—
Chadburn's (Ship) Telegraph Co., Ltd., Cyprus Road, Bootle, Lancs.

TOOL STEEL—
Brown, John, & Co., Atlas Works, Sheffield.

TOWAGE—
Alexander, W. H. J., St. John's Wharf, Wapping, E.
Tilbury Contracting & Dredging Co., Ltd., Queen Anne's Chambers, Westminster, London, S.W.

TUBE PLATE CUTTING-OUT MACHINES—
Campbells & Hunter, Ld., Dolphin Foundry, Leeds.

TUBES—
Royles Ltd., Irlam, Nr. Manchester.
Staffordshire Tube Co., Ltd., Birmingham.
Stewarts & Lloyds, Ltd., 41, Oswald St., Glasgow.
Yorkshire Copper Works, Ltd., Leeds.

TUBES (Brass and Copper)—
Yorkshire Copper Works, Ltd., Leeds.

TUBES & FITTINGS (Wrought Iron)—
Staffordshire Tube Co., Ltd., Birmingham.

TURBINE OIL—
Rimer Bros., Newcastle-on-Tyne.

TURBINES (Auxiliary)—
Belliss & Morcom, Ltd., Birmingham.
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Greenwood & Batley, Ltd., Albion Works, Leeds.
Mather & Platt, Ltd., Manchester.

TURBINES (Propulsive)—
British Thomson-Houston Co., Ltd., Rugby.
British Westinghouse Electric & Mfg. Co., Ltd., Trafford Park, Manchester.
Brown, John, & Co., Ltd., Clydebank, nr. Glasgow.
Gray, Wm., & Co., Ltd., West Hartlepool.
Harland & Wolff, Ltd., Belfast.
Hawthorn, R. & W., Leslie & Co., Ltd., St. Peter's, Newcastle-on-Tyne.
Howden, James, & Co., Ltd., Scotland Street, Glasgow.
Richardsons, Westgarth & Co., Ltd., Hartlepool.
Swan, Hunter & Wigham Richardson, Ltd., Wallsend-on-Tyne.
Thornycroft, J. I., & Co., Ltd., Caxton House, Westminster.
White, J. Samuel, & Co., Ltd., East Cowes, I.W.
Workman, Clark & Co., Ltd., Belfast.
Yarrow & Co., Ltd., Glasgow.

TWIST DRILLS—
Brown, John, & Co., Atlas Works, Sheffield.
Chatwin, Thos., Ltd., Gt. Tindal St., Birmingham.

UPHOLSTERERS—
Stewart, Archibald, & Co., 40-48, Union St., Glasgow

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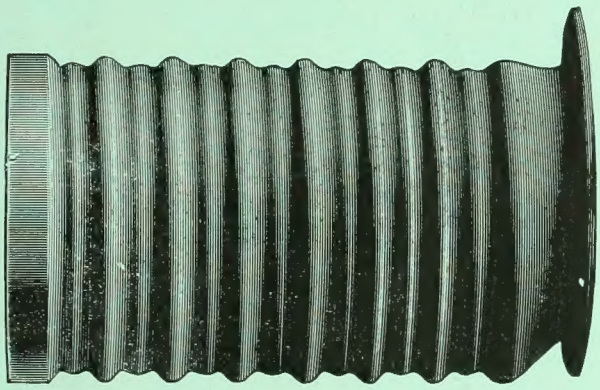

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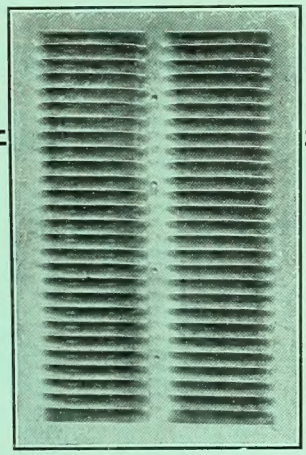

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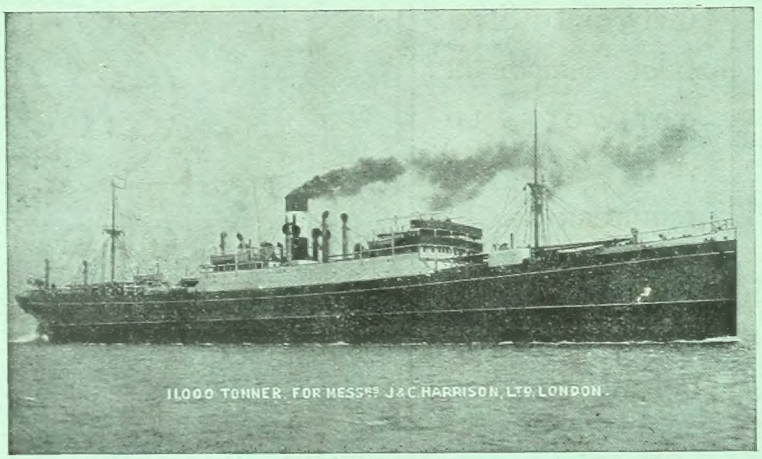

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